

# Rare Plant Rescue

2014 Report

Habitat Stewardship of Rare Plant Species in Saskatchewan



Artwork by Gary Field

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*Nature*  
SASKATCHEWAN

April 2015

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Nature Saskatchewan's Stewards of Saskatchewan

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**EXECUTIVE SUMMARY**

Rare Plant Rescue (RPR), a voluntary stewardship program launched in 2002, engages landowners in conserving habitat where rare plant species occur. RPR is one of five programs within Nature Saskatchewan's Stewards of Saskatchewan (SOS) suite of programs that also includes Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, and the SOS banner program for all other prairie species at risk. These programs use target species at risk as conservation symbols to garner support for prairie biodiversity and habitat protection for all prairie species. As of 2010, Stewards of Saskatchewan now includes all species at risk in Saskatchewan.

Rare Plant Rescue focuses program activities including stewardship, searches, monitoring, education and awareness on eight plant species protected in Saskatchewan both provincially and federally as threatened, endangered, or extirpated (Small White Lady's-slipper, Hairy Prairie-clover, Small-flowered Sand-verbena, Tiny Cryptanthe, Western Spiderwort, Buffalograss, Slender Mouse-ear-cress, and Smooth Goosefoot), one species federally designated as special concern (Dwarf Woollyheads), and seven candidate species for protection in Saskatchewan (Beaked Annual Skeletonweed, Bur Ragweed, Prairie Dunewort, Powell's Saltbush, Prickly Milk-vetch, Small Lupine and Upland Evening-primrose).

Rural landowners with habitat supporting endangered and threatened plants are informed of this natural heritage and invited to sign a voluntary stewardship agreement to further conserve these areas. Rare Plant Rescue prevents inadvertent destruction of habitat by educating landowners, encouraging informed stewardship, and building relationships, all of which can be scaled into stronger forms of protection. There is no other project in Saskatchewan specifically targeting habitat conservation for rare plants.

In the 2014 field season, RPR directly contacted 38 landowners and conducted 20 on-site visits. Five new landowners joined the RPR program by signing the RPR voluntary stewardship agreement, bringing the total number of RPR participants to 80. Together, these participants are conserving 42,384 hectares (104,734 acres) of prairie habitat.

Due to funding restrictions, in 2014 we were only able to hire one RPR summer assistant but no search crew. The summer assistant and RPR coordinator conducted all searching, monitoring, and landowner visits. Staff searched a total of 30 sites for rare plants and found the target species on 9 of them. Monitoring was carried out on 21 sites (quarter sections). Staff recorded 79 new (previously unknown) occurrences of rare plants from all sites visited.

Landowners participating in the program in 2014 received the Stewards of Saskatchewan annual update, information on relevant topics through a Conservation Toolbox folder of various materials, including information on conservation easements, and Nature Saskatchewan's publication *At Home on the Range, Living with Saskatchewan's Prairie Species at Risk*. Newly joined participants received

a gate sign or certificate in recognition of their commitment to rare plant habitat stewardship. Three Conservation Awareness Day events were held in appreciation of landowners, attracting a total of 98 producers.

Contact with other landowners, the general public, and professionals, as well as further education and awareness about RPR and the other SOS programs, was made through staff attendance at 15 events, 7 news releases (resulting in ten newspaper articles and three on-air media interviews), 6 paid advertisements, 6 RPR newspaper/newsletter articles and 5 joint SOS articles, and 7 presentations delivered.

#### **ACKNOWLEDGEMENTS**

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Most importantly, Nature Saskatchewan would like to extend a warm thank you to all of the landowners participating in this project. Without their cooperation and interest, the implementation of Rare Plant Rescue would not be possible.

Thank you!

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- Nature Saskatchewan Member Donations

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Development Fund



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# 1. INTRODUCTION

## 1.1 Rare Plant Rescue

Rare Plant Rescue (RPR) is one of five programs within Nature Saskatchewan's Stewards of Saskatchewan (SOS) voluntary habitat stewardship project. The target SOS programs are comprised of Operation Burrowing Owl (since 1987), Rare Plant Rescue (since 2002), Shrubs for Shrikes (since 2003), Plovers on Shore (since 2008), and the Stewards of Saskatchewan banner program for all species at risk (since 2010).

Rare Plant Rescue, launched in 2002 to address the need to target protection of habitat for rare plants, engages landowners in conserving habitat where native plant species at risk occur. Rural landowners with habitat supporting plant species at risk are informed of this natural heritage and invited to sign a voluntary stewardship agreement to further conserve these areas. Rare Plant Rescue prevents inadvertent destruction of habitat by educating landowners, encouraging informed stewardship, and building relationships, all of which can lead to stronger forms of protection. Development and delivery of RPR is modeled after the well-established and successful Operation Burrowing Owl (OBO) program, one of Canada's longest running stewardship programs.

As all programs within SOS have similar goals - to work with rural landowners to raise awareness and conserve habitat for species at risk - a common newsletter was established in 2002 under the banner name of Stewards of Saskatchewan. The SOS newsletter includes articles relevant to all SOS programs, is sent to all SOS program participants, and creates a sense of community among the rural participants. Where possible, the SOS program staff also work together to develop and share resources to efficiently and effectively deliver the SOS programs.

Active stewardship by landowners is integral to the conservation of the remaining prairie landscape as 85% of southern Saskatchewan's grasslands (native and tame) are privately managed (Saskatchewan Watershed Authority 2002). Further, 40% of the native grasslands (where plant species at risk occur) are under private ownership, with 60% under Crown ownership (Michalsky and Saunders 2009). It is important to involve local landowners in habitat conservation as the cultivation of native prairie and draining of wetlands for agriculture and resource development continue to cause habitat degradation or loss in Saskatchewan.

The prairie region, as well as its biological diversity, is one of our most endangered landscapes, with the primary threat to native plant species at risk being habitat loss. Currently, no other program in Saskatchewan specifically addresses habitat conservation for plant species at risk. As a result, there is a relative lack of information regarding location, distribution and population size for all Saskatchewan plant species at risk. Through the promotion of RPR, both known and newly identified locations will be conserved through increased awareness of plant species at risk and their habitat needs. The areas populated by target RPR species often support unique habitats overlooked by the majority of conservation efforts due to their small size, restricted range, and isolated distribution. These habitats contribute to the healthy functioning of the larger ecosystems of which they are a part, and therefore, are important to conserve.

A landowner can join RPR by having one of the target plant species at risk (or a past record of one of those species) on their land, or by having suitable habitat for a target species at the time of signing up for the program. Participants thereafter remain in the program for as long as the habitat is maintained. RPR participants sign a voluntary agreement to conserve rare plant habitat by not cultivating the land or disturbing the rare plants. The voluntary agreements are indefinite and only expire upon request or upon sale of the property. In return, the landowner is recognized for his/her role in conservation and is provided with an RPR gate sign or certificate, and suggestions and resources for maintaining the habitat they have decided to conserve. Through the annual SOS newsletter and other printed materials, RPR landowners are kept up to date on rare plant information and other conservation news and program activities.

As of 2012, RPR participants have had the opportunity to participate in the Native Plant Society of Saskatchewan's (NPSS) Rare Plants and Ranchers program. Upon completion of a landowner interview and site assessment by an agrologist from the NPSS, participants receive a free, personalized beneficial management plan for their property. NPSS will provide logistical support and access to dollar for dollar cost-sharing to help participants implement management changes suggested in these plans. The recommended management changes benefit both plant species at risk habitat and the landowner's operation (e.g., through invasive weed control). See Section 2.5 for more details.

Voluntary habitat stewardship through a program that provides recognition and information is an effective and cost-efficient means of conserving land. An evaluation of the initial effectiveness of the OBO program (from 1987-1994) demonstrated that OBO had a significant impact on conservation (retention) of grassland habitat at enrolled sites, even during an era of accelerated habitat loss (Warnock and Skeel 2004). A comparison of 108 grassland sites on the Regina Plain (enrolled in OBO in 1987 because they supported owls) with 98 nearby randomly-selected grassland sites in 1987 (not enrolled in OBO), revealed that the amount of grassland remaining in 1994 compared to 1987 was significantly higher on sites enrolled in OBO (66%) than at random sites (48%). The study strongly suggested that voluntary habitat stewardship, where no legally binding agreement is signed, can be a highly effective strategy to conserve habitat.

Through landowner contact, the RPR program maintains and strengthens landowner commitment to conservation. Through ongoing awareness and education, RPR continues to dispel myths about species at risk, promotes a greater understanding of the factors causing the decline of target rare plants, and identifies actions individuals can take to conserve habitat. Through RPR promotion and landowner participation, habitat will be conserved for plant species at risk in our province. Lastly, through landowner participation in the new Rare Plants and Ranchers program, rare plant habitat may be enhanced through implementation of suggested management practices on land enrolled in RPR.

## **1.2 Program Goals in 2014**

The RPR program has four main objectives:

- **Habitat Stewardship** – To conserve habitat for native plant species at risk through voluntary stewardship actions and agreements, and informed private land management. Target species

include nine nationally and provincially listed plant species at risk (Small White Lady's-slipper: extirpated (from Saskatchewan), Tiny Cryptanthe: endangered, Small-flowered Sand-verbena: endangered, Hairy Prairie-clover: threatened, Buffalograss: threatened, Western Spiderwort: threatened, Slender Mouse-ear-cress: threatened, Smooth Goosefoot: threatened, Dwarf Woollyheads: special concern); as well as seven species of concern identified by the Saskatchewan Conservation Data Centre (SKCDC; Bur Ragweed, Prickly Milk-vetch, Plains Grape-fern, Upland Evening-primrose, Small Lupine, Beaked Annual Skeletonweed, and Powell's Saltbush). There are approximately 100 plant species ranked as extremely rare (S1) by the SKCDC that occur in ecoregions with the heaviest human activity (Aspen Parkland, Moist Mixed Grassland, Mixed Grassland, and Cypress Upland), and that are also of interest to RPR but not specifically targeted. Landowners are encouraged to participate in RPR and sign a voluntary stewardship agreement. Conservation easements are promoted as a tool to protect ecologically significant lands in perpetuity. RPR stewards participating in the Rare Plants and Ranchers project are encouraged to improve their rare plant habitat through site-specific management plans and associated financial support (see Section 2.5).

- **Site Identification** – To identify previously unknown locations of rare plants and rare plant habitat throughout Saskatchewan. Locations to search for rare plants are identified through information obtained from the SKCDC, Prairie and Northern Region Canadian Wildlife Service, Native Plant Society of Saskatchewan surveyors, other agency collaboration, and media promotion.
- **Population Monitoring** – To monitor rare plant population numbers and distribution changes, including gathering data on land management that may affect these populations. Monitoring occurs through on-site visits, conversations with participating landowners, reports from the public, and records from other conservation agencies. Monitoring also provides an evaluation of the success of conservation actions in maintaining and increasing population numbers.
- **Education and Awareness** – To provide information to, and increase awareness among, producers and rural and urban residents about rare plant species, their natural history, habitat requirements, and threats; the status of native grasslands; and the importance of conserving native prairie habitat and biodiversity.

The RPR program coordinator develops and delivers the RPR program. Kristen Martin was the RPR program coordinator in 2014. Kristen worked with the other SOS coordinators to deliver communications for the five SOS programs. Beth Dolmage was the RPR summer assistant in 2014. Kristen and Beth conducted rare plant searches and monitoring, visited landowners, collected data, and helped with workshops and events. The SOS summer assistants, Marika Cameron and Emily Putz, and a student volunteer, Brooke Howat, also assisted with rare plant searching and monitoring. The Habitat Stewardship Coordinators for the other SOS programs, Kaytlyn Burrows and Ashley Fortney, and the Species at Risk Manager, Rebecca Magnus (April to May) and Melissa Ranalli (September to March) were also involved in program delivery.

### 1.3 Target Species

In 2014, RPR focused searches, monitoring, and education and awareness on nine plant species at risk (Table 1) occurring in Saskatchewan that are federally listed as endangered, threatened, or of

special concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The nine species that are federally listed are protected under the federal *Species at Risk Act* (SARA), an act that applies to all federal land and to provincial land only in cases where the province does not take responsibility (Government of Canada 2002). These nine species are the highest priority for RPR program activities. See Appendix 1 for species descriptions.

**Table 1. Highest priority plant species at risk targeted by Rare Plant Rescue.**

Species (Latin)	Species Code	Species (Common)	COSEWIC Status	SARA Status	SRank*	Saskatchewan Wildlife Act Designation (1998)
<i>Bouteloua dactyloides</i>	BOUTDAC	Buffalograss	Special Concern	Threatened	S1	None given
<i>Chenopodium subglabrum</i>	CHENSUB	Smooth Goosefoot	Threatened	Threatened	S3	None given
<i>Cryptantha minima</i>	CRYPMIN	Tiny Cryptanthe	Threatened	Endangered	S1	Endangered
<i>Cyripedium candidum</i>	CYPRCAN	Small White Lady's-slipper	Threatened	Endangered	SH	Extirpated
<i>Dalea villosa</i> var. <i>villosa</i>	DALEVIL	Hairy Prairie-clover	Special Concern	Threatened	S2	Endangered
<i>Psilocarphus brevis</i> var. <i>brevis</i>	PSILBRE	Dwarf Woolly-heads	Special Concern	Special Concern	S1S2	None given
<i>Tradescantia occidentalis</i> var. <i>occidentalis</i>	TRADOCC	Western Spiderwort	Threatened	Threatened	S1	Endangered
<i>Transberingia bursifolia</i> ssp. <i>virgata</i>	TRANBUR	Slender Mouse-ear-cress	Threatened	Threatened	S1	Threatened
<i>Tripterocalyx micranthus</i>	TRIPMIC	Small-flowered Sand-verbena	Endangered	Endangered	S1	Endangered

\*SRanks are subnational rankings provided to indicate a species' risk of extirpation that are defined as follows: S1- Extremely Rare/Critically imperiled, S2- Rare/Imperiled, S3-Rare-Uncommon/Vulnerable, S4- Common/Apparently Secure, S5 – Very Common/Demonstrably secure, SH- Extirpated. Range ranks are assigned when existing information on a species indicates that it is straddling two separate ranks (i.e., S4 vs. S5) (Saskatchewan Conservation Data Centre 2012).

### 1.3.1 Buffalograss

Buffalograss (Figure 1) as designated as a species of *special concern* by COSEWIC in April 1998. The status was re-examined and changed to *threatened* in November 2001 (COSEWIC 2005). As of November 2011, it was down-listed to *special concern* by COSEWIC due to an increased known range of extent, but currently remains listed as *threatened* under SARA. At the



**Figure 1. The male flowers of Buffalograss (S. Vinge-Mazer).**

time of publishing the Saskatchewan Wildlife Act, Buffalograss was not included in *The Wild Species at Risk Regulations*. Buffalograss has a provincial rank of S1, or *extremely rare* in Saskatchewan. In 2011-12, COSEWIC's accepted current name for Buffalograss changed from *Buchloë dactyloides* to *Bouteloua dactyloides* (C. Neufeld, personal communication). Buffalograss has an extensive range extending from south-central Mexico north to southern Canada where it is at the northernmost limit of its range. It occurs along the Souris River Valley in southeastern Saskatchewan, near Estevan, and in southwestern Manitoba, near Coulter. Roughly 10% of the Canadian population occurs in Saskatchewan, where the largest population contains about 300 clones covering nearly 200 m<sup>2</sup>. In Manitoba, where 90% of the Canadian Buffalograss occurs, the single population represents about 4,800 clones and covers one hectare.

The Canadian Buffalograss population seems dependent on clay or clay-loam substrate, early season moisture with subsequent drying, moderate erosion or cattle-trampling and grazing, and as a shade intolerant species, no competition from other mixed-grass prairie species. The main threat to Canadian populations of Buffalograss is habitat destruction caused by agricultural use, road or dam building, and clay pit-mining or coal strip-mining. Disruption of the normal fire and grazing regimes may also prove limiting to this species. Cattle grazing may be essential in maintaining it as a disclimax species (a climax community that has been disturbed by various influences, especially by humans and domestic animals).

### 1.3.2 Smooth Goosefoot

Smooth Goosefoot (Figure 2) was not included in *The Wild Species at Risk Regulations*. However, since then, Smooth Goosefoot has been assigned *special concern* status by COSEWIC in April 1992 and up-listed to *threatened* in 2006 based on an updated status report (COSEWIC 2006a). Smooth Goosefoot was re-ranked by the Botanical Assessment Working Group in December 2013, and now has a rank of S3, or *rare-uncommon* (formerly S2, or *rare*). Smooth Goosefoot is found from Alberta to southern Manitoba in Canada, south to eastern Washington and Nevada to the Dakotas, Nebraska and Iowa in the United States. In Canada, Smooth Goosefoot occurs in south-eastern Alberta, southern Saskatchewan, and Manitoba. In Saskatchewan, this species has been found near Beaver Creek, Dunblane, Qu'Appelle, Bridgeford, Caron, Canadenthal, Cramersburg, Broderick, Elbow, Empress, and Piapot.

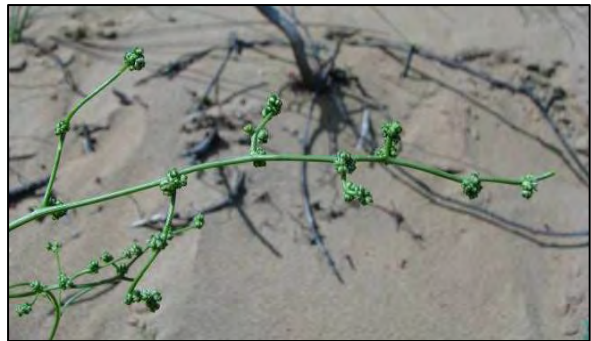


Figure 2. The clustered flowers of Smooth Goosefoot (*S. Vinge-Mazer*).

Smooth Goosefoot requires moisture and naturally disturbed habitats in the form of active sand. It prefers sand dunes and wind-eroded sandy soils. In Canada, Smooth Goosefoot inhabits active sand dunes, sand hills, and riverbanks; it is found in active, unstable sand areas. It is commonly found on south- or west-facing eroding slopes at the edge of stabilizing sand, and less commonly in dune slacks. Populations tend to be highest in areas of finer and more compacted sand. This species rarely grows in very active or stabilized sand and when it does, the populations are always very low. It may occur in areas grazed by cattle either in sand dune blowouts or along sandy cattle trails. Being both a halophyte (adapted to a saline

environment), and a xerophyte (adapted to a dry arid environment), this plant can be found in alkali-impregnated areas and typically dry areas.

In 2014, Smooth Goosefoot critical habitat was identified based on a decision tree approach regarding the quality of available occurrence information (up to but not including 2013 data), and how well the habitat is defined (Environment Canada 2014a). The total area containing critical habitat for Smooth Goosefoot identified in Canada is 5,163 hectares, with 4,097 hectares in Saskatchewan.

Loss of habitat is the main limiting factor for the Smooth Goosefoot. It occurs in the grasslands of the prairies, an environment which is threatened by human activities such as agriculture, dune stabilization, grazing, and fire suppression.

### 1.3.3 Tiny Cryptanthe

Tiny Cryptanthe (Figure 3) was listed as *endangered* in 1998 by COSEWIC and was reassessed in 2000 as *endangered* based on an existing status report which emphasized that the highly localized, disjunct populations were at risk due to small population sizes and occurrence in disturbed areas (Environment Canada 2006a). In May of 2012, COSEWIC again re-examined the status of Tiny Cryptanthe and down-listed it to *threatened*. This decision was based on new information obtained through greatly increased search effort, indicating both a larger range and population size than previously



Figure 3. The raceme of Tiny Cryptanthe (C. Neufeld).

thought. Tiny Cryptanthe currently remains listed as *endangered* under SARA. In Saskatchewan, Tiny Cryptanthe was listed as *endangered* in 1999 under *The Wild Species at Risk Regulations*, and therefore, is protected on private, provincial and federal lands under Part V of *The Wildlife Act* (Saskatchewan Environment 1998). Tiny Cryptanthe has a provincial ranking of S1, or *extremely rare*, in Saskatchewan.

In 2010, Tiny Cryptanthe critical habitat was identified based on a decision tree approach regarding the quality of available occurrence information, and how well the habitat is defined (Environment Canada 2010a). To date, the total area of critical habitat identified in Canada is 8,298 hectares.

Prior to 2004, Tiny Cryptanthe had only a few records of occurrence in Alberta and Saskatchewan and a population estimated at less than 100 plants in Canada (Smith 1998b). The Recovery Strategy reported 32 known locations in Canada and an estimate of 343,770 individual plants. More than 100 additional occurrences were discovered and recorded during the preparation of the 2006 recovery strategy, some of which linked populations that had previously appeared distinct (COSEWIC 2012). This has resulted in a reduction of the overall number of known populations from 32 to 25; however, it increased the area of occupancy and extent of occurrence from approximately 200 km<sup>2</sup> to nearly 16,000 km<sup>2</sup> (COSEWIC 2012). Of the extant populations of Tiny Cryptanthe existing in Canada, there are 22 in Alberta, two in Saskatchewan and one straddling the Alberta-Saskatchewan border. Surveys conducted in 2004, with RPR staff participation, located one of two

known Saskatchewan sites and discovered two new sites along the South Saskatchewan River west of Leader to the Alberta border (Environment Canada 2006a). The Westerham site has not been located despite numerous search attempts since it was reported in the 1970s, and is now considered to have been misidentified or extirpated (COSEWIC 2012).

Current information suggests that Tiny Cryptanthe grows within a few kilometres of a river system and prefers three types of habitat: 1) sandy, level to rolling upland areas, and sand dunes near valley breaks; 2) valley slopes with up to 50% slope; and 3) level or gently sloping terraces in the valley bottom, particularly in meander lobes (Environment Canada 2006a). The microhabitat of Tiny Cryptanthe tends to be xeric to subxeric with moderate slope. Aspects can vary, but are predominantly southerly to easterly directions. Tiny Cryptanthe seems to require low litter levels, and at least 10% bare soil for establishment (Environment Canada 2006a).

Tiny Cryptanthe habitat continues to decline in both the quality and extent (Environment Canada 2012). Specifically, threats to the Tiny Cryptanthe are loss of habitat through cultivation and urban development; changes to hydrological regimes; and fire and grazing suppression, which facilitates the encroachment of other vegetation, including invasive species. In Saskatchewan, all known sites are used for ranching and should be relatively secure as long as there is no major change in land use (Environment Canada 2006a).

#### 1.3.4 Small White Lady's-slipper

The Small White Lady's-slipper (Figure 4) was designated as *endangered* in Canada in 1981 (Brownell 1981) and its status was reconfirmed in 2000 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC 2005). In November 2014, its status was down-listed to threatened by COSEWIC. In Saskatchewan, it was designated as *extirpated* in 1999 in *The Wild Species at Risk Regulations*. Small White Lady's-slipper has a provincial rank of SH, or *extirpated* in Saskatchewan.



Figure 4. Small White Lady's-slipper (B. Slaughter).

A single specimen was collected in 1895 near Indian Head by David Macoun (J. Hudson, personal communication)<sup>1</sup>. This is the only Saskatchewan record, and the population has never again been located. Historically, the Canadian range included six counties in Ontario and five sites in Manitoba in addition to the Saskatchewan record. Presently, there are 18 extant populations in Manitoba, and 7 in Ontario (Environment Canada 2014b).

This orchid is shade-intolerant, and requires habitat consisting of open grasslands, marshes, and calcareous fens. Changes to microhabitat conditions from a lack of traditional fire and grazing practices and invasion by species like Leafy Spurge (*Euphorbia esula*) have resulted in a reduction in the high levels of light required for the Small White Lady's-slipper to grow (Brownell 1981). Loss of this habitat type over its range due to urbanization and agriculture has also contributed to its decline.

<sup>1</sup> Maher et al., 1979 and Brownell, 1981 misidentified John Macoun as the collector.

### 1.3.5 Hairy Prairie-clover

In Canada, Hairy Prairie-clover (Figure 5) was listed as *threatened* by COSEWIC in 1998 and retained its status as *threatened* after re-examination in 2000 based on the existing status report and addendum (Smith 1998a). In November 2011, it was down listed to *special concern* by COSEWIC due to an increase in the known population size and extent of occurrence, but it remains listed as *threatened* by SARA. It is listed in Saskatchewan as *endangered* in *The Wild Species at Risk Regulations*, and has a provincial rank of S2, or *rare*.



Figure 5. Hairy Prairie-clover (S. Vinge-Mazer).

There are two known locations in Saskatchewan: one area near Dundurn and another near Caron. Plants grow on active or partially stabilized dunes and blowouts, usually on southwest facing slopes. The main threat to this plant is the stabilization of sand dunes from the spread of Leafy Spurge (*Euphorbia esula*). Other threats include the removal of a natural regime of grazing and fire, which provide disturbance to keep dunes active.



Figure 6. Dwarf Woollyheads (K. Martin).

### 1.3.6 Dwarf Woollyheads

Dwarf Woollyheads (Figure 6) was designated as *endangered* by COSEWIC in November 2003. This original assessment occurred prior to the discovery of the Prairie population, and referred to what is now known as the Southern Mountain population. With the discovery of the Prairie population in Saskatchewan and Alberta, the Vascular Plant Specialists of the Subcommittee for Plants and Lichens (COSEWIC) recognized the Prairie population as a separate designatable unit in April 2006, and designated it as *special concern* (COSEWIC 2006b). Dwarf Woollyheads was not included in *The Wild Species at Risk Regulations*. In Saskatchewan, it has a provincial rank of S1S2; *imperiled to critically imperiled*.

The Prairie population is restricted to extreme southwestern Saskatchewan and south-eastern Alberta. The Saskatchewan occurrences are located near the Lodge and Battle Creeks. They are found growing on seasonally flooded, shallow depressions. This species is threatened mainly by habitat destruction from agricultural development and oil and gas (primarily pipeline) activities.

### 1.3.7 Western Spiderwort

Western Spiderwort (Figure 7) was designated as *threatened* in



Figure 7. Western Spiderwort (M. Ranalli).



April 1992 by COSEWIC (Smith and Bradley 1992b). This status was confirmed in November 2002 (COSEWIC 2002). In Saskatchewan, it was listed as *endangered* in 1999 in *The Wild Species at Risk Regulations*. It has a provincial ranking of S1, or *extremely rare*.

In Canada, Western Spiderwort is located in a few locations from Alberta to Manitoba. In Saskatchewan, there have only been a few confirmed locations around the Elbow Sand Hills, including Douglas Provincial Park. The plants have been found mostly on southwest facing slopes of active sand dune areas although some locations have become stabilized (Saskatchewan Environment 2001). Dune stabilization from encroachment of invasive species and lack of grazing and fire, as well as loss of sand dune habitat to cultivation, are the main factors threatening this population.

In 2013, Western Spiderwort critical habitat was identified based on the best available information (up to 2010) and using a decision tree approach that was developed by the Recovery Team for Plants at Risk in the Prairie Provinces (Environment Canada 2013). To date, the total size of the areas containing critical habitat is 2851 hectares, with 1047 hectares identified in Saskatchewan (Environment Canada 2013).

### 1.3.8 Slender Mouse-ear-cress

Slender Mouse-ear-cress (Figure 8) was assigned *endangered* status by COSEWIC in 1992 (Smith 1992), but down-listed to *threatened* in 2000 because an updated status report indicated additional occurrences in Alberta, widening its previously known distribution (Smith 1999). In Saskatchewan, it is listed as *endangered* in *The Wild Species at Risk Regulations*. It has a provincial ranking of S1, *extremely rare*.



Figure 8. Slender Mouse-ear-cress (*S. Vinge-Mazer*).

In 2010, Slender Mouse-ear-cress critical habitat was identified based on a decision tree approach regarding the quality of available occurrence information, and how well the habitat is defined (Environment Canada 2010b). To date, the total area of critical habitat identified in Canada is 1372 hectares, with 724 hectares identified in Saskatchewan (Environment Canada 2010b).

Distribution of Slender Mouse-ear-cress in Canada is limited to small populations in Alberta and Saskatchewan. In Saskatchewan, there are 17 known populations, although two of those do not have accurate and/or precise location information to relocate, and five additional populations are historic locations (Environment Canada 2010b). Populations in Saskatchewan exist near the South Saskatchewan River at Estuary and Alkali Creek, locations near Lake Diefenbaker including Lucky Lake/Birsay and Riverhurst, as well as farther north near Stranraer. This species typically occurs in association with Sage Bush (*Artemisia cana*) and Prickly Pear Cactus (*Opuntia polyacantha*) in sandy native prairie in flat areas, depressions or eroded slopes (Smith 1999). Slender Mouse-ear-cress appears unable to re-establish itself on turned soil, so significant habitat loss associated with agriculture and industrialization is the main threat to this species (Smith 1999). Other threats to

Slender Mouse-ear-cress relate to habitat degradation, alteration of grazing and fire regimes, invasive species, and climate change (Environment Canada 2010b).

### 1.3.9 Small-flowered Sand-verbena

Small-flowered Sand-verbena (Figure 9) was listed as *threatened* in Canada in 1992 (Smith and Bradley 1992a). It was re-examined and designated *endangered* in November 2002 (COSEWIC 2005). In Saskatchewan, it was listed as *endangered* in 1999 in *The Wild Species at Risk Regulations*. It is considered *extremely rare* in the province and has a ranking of S1.

In 2010, Small-flowered Sand-verbena critical habitat was identified based on a decision tree approach regarding the quality of available occurrence information, and how well the habitat is defined (Environment Canada 2010c). To date, the total area of critical habitat identified in Canada is 1500 hectares, with 305 hectares identified in Saskatchewan and the remaining amount in Alberta (Environment Canada 2010c).

In Canada, Small-flowered Sand-verbena is restricted to four areas in Alberta and four in Saskatchewan. In Saskatchewan, Small-flowered Sand-verbena is found in the Empress Meander and Cramersburg sand hills as well as unnamed sand hills along the South Saskatchewan River bank at Saskatchewan Landing and south of Outlook (Environment Canada 2010c). This species is found on active to somewhat vegetated dunes or blowouts on south-, west-, and east-facing slopes, as well as on hard-packed sand on level ground (Smith and Bradley 1992a; Environment Canada 2010c). Threats include stabilization of dunes due to invasive plants and/or the lack of fire and grazing. Cultivation and development further contribute to habitat loss.

### 1.3.10 Additional Rare Plants

Rare Plant Rescue also targets seven other species which are candidates for protection in the province of Saskatchewan (Table 2). See Appendix 1 for species descriptions.

- **Prickly Milk-vetch** (Figure 10) – is found on active and stabilized sand dunes and dry, rocky, gravelly or sandy prairie hilltops, slopes and badlands. Occurrences of this species in Saskatchewan are concentrated in the Great Sand Hills. In 2014, it was re-ranked by the Botanical Assessment Working Group (see Section 4.6) from an S1 to an S2.



Figure 9. Small-flowered Sand-verbena (K. Martin).



Figure 10. Prickly Milk-vetch (T. Sample).



Figure 11. Male flowers of Bur Ragweed (S. Vinge-Mazer).

- **Bur Ragweed** (Figure 11) – prefers open, dry sites, fine, sandy loam soils, and river draws or semi-moving sand dunes. It is found in southwestern and south-central Saskatchewan. In 2011, it was re-ranked by the Botanical Assessment Working Group (See Section 4.6) from an S2 to an S2S3.

- **Powell’s Saltbush** (Figure 12) – is found in saline, sub-saline and alkaline clay flats, prairie, badlands and river valleys in the southern third of Saskatchewan. It is an excellent forage and restoration species.



Figure 12. Herbarium mount of Powell’s Saltbrush (C. Ladyka).

- **Prairie Dunewort (also known as Plains Grape-fern, Figure 13)** – was recognized as being a distinct taxon only recently (1982). This fact, accompanied by its few known locations and small population sizes, suggests that this species is in danger of disappearing before we understand the significance of its unique characteristics.

- Prairie Dunewort’s North American range extends from southeastern Alberta, east to New Brunswick, south to Oregon and east to Colorado and New York. In Saskatchewan, all six records are located within an area that extends west from the Saskatoon region to the Alberta border and south to the Montana border. Populations have been found in the Burstall, Fox Valley, Dinsmore, Secretan, Stranrear and Saskatoon areas.



Figure 13. Plains Grape-fern (S. Vinge-Mazer).

- This species can be found in dry gravelly or sandy prairie, sand dune complexes, and gravelly slough margins. It is the only *Botrychium* species known to grow in prairie habitats. It is often associated with Small-leaved Pussytoes (*Antennaria parvifolia*), Muhly (*Muhlenbergia* spp), and Little Bluestem (*Schizachyrium scoparium*). This plant does not tolerate hot, dry weather, and often disappears by mid-June.

- Cultivation and over-seeding of forage crops are likely the most severe threats to the species and may have led to the elimination of Prairie Dunewort at two Saskatchewan sites. Overgrazing and oil and gas development may also pose a threat through habitat degradation, trampling, and introduction of exotic species. Light to moderate grazing should not be considered a threat, provided sloughs are appropriately fenced.



Figure 14. Upland Evening Primrose (D.W. Taylor).

- **Upland Evening Primrose** (Figure 14) – is drought-intolerant and prefers light sandy soils on dry prairie and sagebrush slopes, and banks of arroyos. It is found in extreme southwestern Saskatchewan.

▪ **Small Lupine** (Figure 15)– occurs in southern Alberta and Saskatchewan. It primarily occurs in dunes, sandy prairies, stream valleys, badlands, and roadsides. In 2014, it was re-assessed by the Botanical Assessment Working Group (see Section 4.6) and it remained an S3 species.



Figure 15. Small Lupine (*M. Ranalli*).

▪ **Beaked Annual Skeletonweed** (Figure 16) – has a recommended provincial status of *rare/imperiled*. Its provincial rank was reassessed by the Botanical Assessment Working Group (see Section 4.6) in 2012 and it remained as an S2. It ranges south from southern Alberta to southwestern Saskatchewan and Manitoba to Colorado, Texas, Oklahoma and Iowa. In Saskatchewan, it has been found in sand hills as far north as Manito Lake and Beaver Creek and east to Mortlach. Populations have been recorded in the Cypress Hills, Piapot, Mortlach, Beverly, Aiktow, Webb, Tompkins, Crane Lake, Bigstick Lake, Turnstall, Bitter Lake, North Great Sand Hills, Burstall, Westerham, Leader, Empress, Cramersberg, Elbow, Proctor, Dunblane, Dundurn and Manito Sand Hills.

▫ This species occupies dry, sandy prairies and plains, stream banks and canyons, where it colonizes bare to semi-bare sands, mainly in blowouts. It is found in open sand near edges of active sand dunes, or in recently stabilized sand near active dunes. It occurs with Lance-leaved Psoralea, Smooth Goosefoot and less frequently Common Skeletonweed. This plant is a pioneer of open sand, and therefore, important in recovering sandy soils from drought and erosion as well as human and domestic animal disturbances.



Figure 16. Beaked Annual Skeletonweed.

▫ Sand hill stabilization may reduce the amount of habitat available to this species. Exotic species such as Russian Thistle, Blue Lettuce, Downy Brome and Leafy Spurge also pose a threat. Despite being an annual species that is grazed by cattle, Beaked Annual Skeletonweed produces abundant seed. Grazing should be maintained to ensure the existence of suitable habitat. Suppression of the natural fire regime has resulted in increasing shrub cover, which contributes to the stabilization of sandy soils.

**Table 2. Other plant species at risk targeted by Rare Plant Rescue.**

<b>Species (Latin)</b>	<b>Species Code</b>	<b>Species (Common)</b>	<b>COSEWIC Status</b>	<b>SRank*</b>
<i>Ambrosia acanthicarpa</i>	AMBRACA	Bur Ragweed	Candidate List	S2S3
<i>Astragalus kentrophyta</i> var. <i>kentrophyta</i>	ASTRKEN	Prickly Milk-vetch	Candidate List	S2
<i>Atriplex powellii</i>	ATRIPOW	Powell's Saltbush	Candidate List	S1
<i>Botrychium campestre</i>	BOTRCAM	Prairie Dunewort	Candidate List	S1
<i>Neoholmgrenia andina</i>	NEOHAND	Upland Evening Primrose	Candidate List	S1
<i>Lupinus pusillus</i> ssp. <i>pusillus</i>	LUPIPUS	Small Lupine	None	S3
<i>Shinnersoseris rostrata</i>	SHINROS	Beaked Annual Skeletonweed	Candidate List	S2

\*SRanks are subnational rankings provided to indicate a species' risk of extirpation that are defined as follows: S1- Extremely Rare/Critically imperiled, S2- Rare/Imperiled, S3-Rare-Uncommon/Vulnerable, S4- Common/Apparently Secure, S5 – Very Common/Demonstrably secure, SH- Extirpated, range ranks are assigned when existing information on a species indicates that it is straddling two separate ranks (i.e., S4 vs. S5) (Saskatchewan Conservation Data Centre, 2012)

## 2 HABITAT STEWARDSHIP

### 2.1 Reporting of Rare Plants to Rare Plant Rescue

Reporting of rare plant locations to Rare Plant Rescue (RPR) by the public is not common since the target species are not well known, nor are they easy to distinguish from similar related species. However, reporting is encouraged since once verified, new sightings are a means of increasing the number of RPR participants and contributing data to the Saskatchewan Conservation Data Centre (SKCDC). Reporting of sightings is solicited through working with other agencies as well as articles in various newsletters and rural newspapers.

Rare plants are usually reported to RPR in one of three ways. Plants can be reported by other conservation agencies, often surveying for rare plants in cooperation with Nature Saskatchewan. In addition, members of the Native Plant Society of Saskatchewan (NPSS), many of whom are amateur botanists, may report rare plant sightings to RPR or NPSS (which forwards sightings to RPR with the landowner's permission). Finally, the public can report rare plant sightings to Nature Saskatchewan's toll-free "Hoot" Line (1-800-667-4668), which was set up in 1992 to facilitate reporting of Burrowing Owls to the Operation Burrowing Owl program. Reports are followed up with a site verification of the plant.

RPR received one report from a landowner in early 2015 about a grape-fern that they had found on their land in the summer of 2014. Photos confirmed that it was a Virginia Grape-fern (*Botrychium virginianum*), an S5 (Table 3).

**Table 3. Reports of plant species at risk to Rare Plant Rescue in 2014-2015.**

Date Reported	Species Reported	General Location of Plant	Investigation Results	How did reporter find out about RPR?
February 2015	Virginia Grape-fern	NE of Saskatoon	Photos confirmed that it was <i>Botrychium virginianum</i> , as the landowner had correctly suggested.	Saw an article about grape-ferns written by Stewards of Saskatchewan staff in <i>Nature Views</i>

There are two outstanding reports of Hairy Prairie-clover sightings, one from 2008 and one from 2010 that have yet to be investigated (Table 4). These locations will be visited the next time Stewards of Saskatchewan staff visit those areas, as time and resources allow.

**Table 4. Outstanding reports from 2008 and 2010, and results from 2014.**

Date Reported	Species Reported	General Location of Plant	Investigation Results from 2014
November 2008	Hairy Prairie-clover	Goodwater	Not conducted due to time constraints
September 2010	Hairy Prairie-clover	Mossbank	Not conducted due to time constraints

#### Recommendations:

- Investigate any reported sightings not yet verified, and follow-up with landowners whose land supports target species, or potential habitat, regarding participating in the RPR program.

- Maintain regular contact with the Prairie Plant Species at Risk Recovery Team and with partner organizations working in areas where they may encounter rare plants.

## 2.2 Voluntary Stewardship Agreement with Landowners

Participants in the Rare Plant Rescue program sign a voluntary “hand-shake” agreement in which they agree to conserve habitat for current or historical records of rare plants by not cultivating the grasslands. The agreement (Appendix 2) is non-binding and can be cancelled at any time, making this commitment attractive to the landowner. Each agreement can include one or multiple sites (quarter sections), and includes the portion of the site(s) that is native habitat.

There are two ways to participate in the program:

- **Targeted Participants:** Targeted RPR participants own or manage land in target areas of the province (within the known range of a plant species at risk). These lands may or may not have rare plants, but must have habitat capable of supporting a rare plant species. This ensures that sites that might support a rare species’ seed bank, or might serve as future habitat, are not overlooked for protection.
- **Non-targeted Participants:** Non-targeted participants own or manage native prairie land, but are outside of rare plant target areas. These lands may be in an area which supports as yet undiscovered rare plant populations, or the land may support plant species that could become rare in the future.

Land ownership can be private or public. Examples of public lands managed by participants include grazing co-ops, Provincial Parks, and other provincial Crown lands.

In 2014, 5 new landowners joined the RPR program by signing Voluntary Stewardship Agreements (verbal agreements are no longer offered), to bring the total number of participants to 80. Of those 80 landowners:

- 55 have signed a Voluntary Stewardship Agreement (VSA), 20 have verbally committed to the VSA and may sign in the future, and 5 have indicated that they have no intention of ever destroying the rare plant habitat on their land but would rather not sign a VSA at this time; and
- 38 have land currently supporting a rare plant species (either federally rare or provincially rare).

RPR Stewards are currently conserving approximately 42,384 hectares (104,734 acres) of native prairie habitat for rare plants. Of this, approximately:

- 15,734 hectares (38,882 acres) are privately owned lands;
- 4,738 hectares (11,710 acres) are public lands;
- 21,716 hectares (53,662 acres) are privately managed provincial Crown lands;
- 194 hectares (480 acres) are privately managed federal lands;

## **Recommendations:**

- Contact RPR targeted participants who were not reached in 2014; encourage those who have a verbal agreement to sign a voluntary stewardship agreement.
- Use participation in the Rare Plants and Ranchers program (which includes personalized management plans, logistical support, and access to funding to implement management changes) as incentive for verbal participants to join Rare Plants and Ranchers.
- Determine the current owners/managers of lands which were previously part of the RPR program under landowners with whom contact has been lost or who have sold their land, and encourage the current owners/managers to join the RPR program.

## **2.3 Communications with Landowners**

### **2.3.1 Personal Visits with Landowners**

Rare Plant Rescue contacts landowners by phone where landowners own or manage suitable land in target areas (within the range of a particular plant species at risk). We introduce ourselves as staff from Nature Saskatchewan, a non-government, non-profit charitable organization, and tell landowners that we are calling concerning a program called Rare Plant Rescue. We describe RPR as a *land stewardship* program aimed at locating rare plants in the province and providing landowners with information about rare plants and native prairie habitat so that they can make informed decisions that will benefit the rare plants on their land. We tell them about the species we are looking for and ask if they have ever heard of, or seen the species. We describe the type of habitat the plants grow in, and ask the landowner if any of their land fits this description. We also ask if they would mind if we stopped by or gave them another call when we are in the area to look for the species on their land. If they agree, we ask if they would like us to stop by the house before or after the search to discuss our findings and provide them with informational brochures and other printed materials. As part of the objectives of Rare Plant Rescue, we conduct as many on-site visits with landowners as possible to discuss our survey findings, further discuss the program and how they can be involved, and provide them with stewardship information, including information on the rare plant(s) we are searching for.

In 2014, we contacted 38 landowners (including regarding Rare Plants and Ranchers), and arranged 10 on-site visits with current RPR participants and 10 on-site visits with potential participants (Table 5). Of the 10 visits with potential participants, 5 (50%) resulted in the landowner joining the RPR program by signing our voluntary stewardship agreement (Section 0). One additional landowner who had previously been involved as a verbal participant but had not been receptive to signing an agreement in past years, signed a VSA in 2014. Responses to cold calls (i.e., where no previous contact has been made) were positive, with 10 of 14 landowners (71%) contacted this way giving us permission to search their land in 2014 or in future years.

## **Recommendations:**

Cold calls were successful in 2014 in terms of landowners allowing us to search their land for rare plants now or in future years. However, most of these landowners were not interested or



**Table 5. Summary of landowner contacts and visits made by Rare Plant Rescue in 2014.**

<b>Landscape Area</b>	<b># Landowners Contacted</b>	<b># Visits with Potential RPR Stewards</b>	<b># Visits with Current RPR Stewards</b>	<b># New Stewards</b>
Cypress Upland	7	3	0	0
Wild Horse Plain	2	1	0	1
Arm River Plain	1	0	0	0
Eyebrow Plain	1	0	0	0
Griffin Plain	5	0	3	1
Souris River Plain	1	1	0	0
Goose Lake Plain	4	1	3	1
Bindloss Plain	5	2	0	2
Maple Creek Plain	1	0	0	0
Coteau Hills	6	2	3	0
Eston Plain	5	0	1	0
<b>Total</b>	<b>38</b>	<b>10</b>	<b>10</b>	<b>5</b>

ready to sign a voluntary stewardship agreement at that time. Recruitment likely is easier when landowners either: a) have some interest in conservation prior to contact with RPR, or b) make the initial contact with RPR. This might be explained by social marketing principals, which indicate that the uptake of ideas and commitment to further actions is far greater in individuals that already have made a first step. Cold calling should continue to be used to locate landowners who are willing to let RPR conduct rare plant searches on their land, as this may lead to the discovery of additional rare plant occurrences, and may result in new participants joining RPR after they become familiar with us and the RPR program for several years.

- Continue to work with other conservation organizations to find landowners and managers that have already exhibited interest in conservation and who have land in areas where target species may be found. Contact the potential stewards whose interest in RPR is forwarded by a partner organization.
- Remain in contact with landowners previously contacted by RPR who were receptive to searches, but did not sign an agreement. Experience has shown that some of these landowners will be receptive to signing an agreement in the second year of being contacted by RPR, therefore, a strong effort to sign these participants will be made. Continue to offer incentives to sign a VSA (e.g., free newsletter, participation in the Rare Plants and Ranchers program).

### **2.3.2 Conservation Toolbox**

The Stewards of Saskatchewan (SOS) Conservation Toolbox is a collection of information on species at risk, prairie habitat, and conservation options for interested landowners. This information is discussed with landowners during personal visits and provided to them in an SOS folder to keep for future reference. Items in the toolbox are also distributed (individually) at venues and events other than landowner visits.

In 2014, toolboxes for the RPR program included the following items (Appendix 3):

- RPR Voluntary Stewardship Agreement form for non-members (see Appendix 2)
- RPR, Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, and Stewards of Saskatchewan banner program brochures
- *A Pocket Guide to the Rare Plants of Southern Saskatchewan* produced by Nature Saskatchewan (excluded from Appendix 3)
- Information about other prairie species at risk in the area including the Burrowing Owl, Loggerhead Shrike, Piping Plover, and Sprague's Pipit
- Fall 2013/Spring 2014 *Stewards of Saskatchewan* newsletter (excluded from Appendix 3)
- Common Conservation Myths Answered fact sheet produced by Nature Saskatchewan
- Beneficial Management Practices for (Bird) Species at Risk fact sheet produced by Nature Saskatchewan
- Conservation Easements information sheet produced by Nature Saskatchewan
- Conservation Easements fact sheet produced by the Saskatchewan Prairie Conservation Action Plan (SK PCAP)
- Nature Saskatchewan privacy policy
- *At Home on the Range, Living with Saskatchewan's Prairie Species at Risk* guide (Figure 17) published by Nature Saskatchewan (excluded from Appendix 3)
- Rare Plants and Ranchers – A Stewardship Solution fact sheet
- Native Plant Society of Saskatchewan brochure
- Canada's Species at Risk Program booklet produced by Environment Canada (excluded from Appendix 3)
- Nature Saskatchewan's Brochure
- Brochure on Ecological Goods and Services
- Other relevant stewardship information for landowners: fact sheets on Open Pipes and Wildlife Friendly Fences
- Business card of the Habitat Stewardship Coordinator (excluded from Appendix 3)

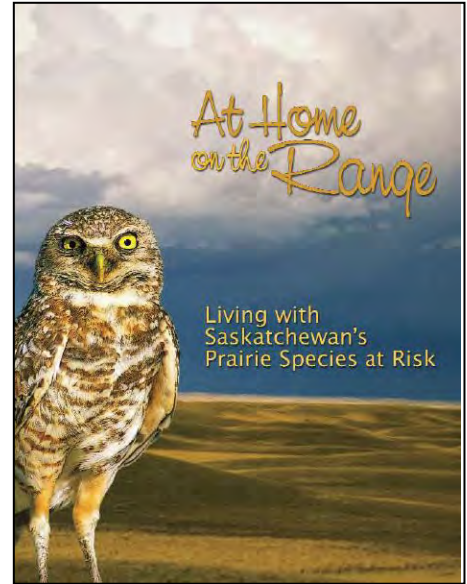


Figure 17. Cover page of *At Home on the Range*.

In 2014, a total of 18 toolboxes were distributed to interested landowners by RPR during landowner visits, or by mailing or dropping them off at landowner residences when visits were not possible. Landowners are encouraged to retain their toolboxes from year to year and to add new information to it as it becomes available. No updates were made to toolboxes for existing landowner participants, but we provided new toolboxes for those who no longer had theirs. Materials in the toolbox and the toolbox folder have some recycled content, or are printed on FSC certified paper whenever possible.

### Recommendations:

- Each year assess and update the contents of the SOS conservation toolbox as part of ongoing review and development of SOS landowner visit protocols. Materials are added or removed in order

to provide our program participants with the best available information to help them make informed stewardship decisions.

- Continue to develop a two-page fact sheet about general Beneficial Management Practices for rare plants to add to the conservation toolbox, to complement the Beneficial Management Practices fact sheet for bird species at risk.

### **2.3.3 Stewards of Saskatchewan Newsletter**

The Stewards of Saskatchewan annual newsletter is a collaboration between Nature Saskatchewan's Operation Burrowing Owl (OBO), Rare Plant Rescue, Shrubs for Shrikes (SFS), Plovers on Shore (POS), and the banner stewardship programs. This newsletter was first published in 2002 with the initiation of RPR and SFS, and replaced the OBO annual newsletter that was published from 1987-2001. The SOS newsletter, compiled and printed in the fall, keeps program participants and others informed about activities and opportunities within the programs and also provides information about other prairie species and initiatives. The Fall 2014/Spring 2015 edition (Appendix 4) was shortened due to limited funding. It included a Winter Greeting letter, a brief update on all five SOS programs informing participants on the latest program news and successes from our 2014 field season, and a Spring 2015 partner events list. This winter update was mailed out in January 2015 to all landowners participating in one or more of the SOS programs.

### **2.3.4 Conservation Awareness Day Events**

Conservation Awareness Day (CAD) events are hosted by Nature Saskatchewan's five Stewards of Saskatchewan (SOS) programs (RPR, OBO, SFS, POS, and SOS banner). These events are directed at SOS program participants, but other rural landowners and interested individuals are welcomed. These events provide an opportunity for our staff to visit and further develop working relationships with rural landowners, strengthen relationships with participating stewards, and to recognize the stewards' conservation efforts. Staff are able to communicate with landowners in an interactive format, while providing information on various conservation topics.

In 2014-2015, the SOS programs co-hosted three CAD events with partner agencies. For the first CAD, held in July in Eastend, we partnered Grasslands National Park of Canada (Parks Canada) and the Nature Conservancy of Canada and was held in July in Eastend, Saskatchewan (Table 6; Figure 18). For the second CAD, held in December in Elbow, we partnered with Douglas Provincial Park, the South Saskatchewan River Watershed Stewards, and the Saskatchewan Water Security Agency (Table 6). We partnered with the Saskatchewan Burrowing Owl Interpretive Centre, the Saskatchewan Ministry of Agriculture, and the South of the Divide Conservation Action Program to hold the third CAD, in Val Marie in February 2015 (Table 6). All three events were well-attended and well-received by landowners. The locations were chosen based on proximity to, and number of stewards involved in, SOS programs, conservation issues facing the area, and locations of past CAD events. CADs were promoted by personal invitations via mail-outs (Section 2.3.5) and phone calls to participating and potential SOS stewards.



**Figure 18. Summer staff Beth Dolmage, Emily Putz, and Marika Cameron present at the Conservation Awareness Day event in Eastend, SK in July 2014 (Nature Saskatchewan).**

**Table 6. Attendance at Conservation Awareness Day events in 2014-2015.**

<b>Partner Organization(s)</b>	<b>Location</b>	<b>Day</b>	<b>Date</b>	<b>Attendees</b>
Grasslands National Park of Canada (Parks Canada), Nature Conservancy of Canada	Eastend	Thursday	July 17	40
Douglas Provincial Park, Saskatchewan Water Security Agency, South Saskatchewan River Watershed Stewards	Elbow	Thursday	Dec. 4	18
Saskatchewan Burrowing Owl Interpretive Centre, Saskatchewan Ministry of Agriculture, South of the Divide Conservation Action Program	Val Marie	Thursday	Feb. 26	40

The 2014 CAD events featured numerous presentations on topics including Nature Saskatchewan and the Stewards of Saskatchewan habitat stewardship programs, beneficial management practices for Burrowing Owls and Loggerhead Shrikes, and common conservation myths. Partnering agencies also delivered presentations, including:

- Grasslands National Park of Canada (Parks Canada) – restoration and resource management programs
- Nature Conservancy of Canada – Old Man on His Back Ranch
- Douglas Provincial Park – invasive species control in Douglas Provincial Park
- Saskatchewan Water Security Agency – Piping Plover monitoring at Lake Diefenbaker

- South Saskatchewan River Watershed Stewards – water quality and invasive species initiatives and monitoring
- Saskatchewan Burrowing Owl Interpretive Centre – biology and ecology of the Burrowing Owl
- Saskatchewan Ministry of Agriculture – Environmental Farm Plan and Agri-environmental Group Plans
- South of the Divide Conservation Action Program – initiatives and progress in implementation of the South of the Divide Multi-Species Action Plan

Participants at the 2014-15 CAD event in Val Marie were able to meet an educational Burrowing Owl from the Saskatchewan Burrowing Owl Interpretive Centre (located in Moose Jaw). The owl is an excellent tool for spreading awareness, and is especially popular with the children that attend the events. At the Val Marie CAD, we also tried to engage the children who attended (~10 in total) by setting up a colouring table, complete with crayons, markers, and Stewards of Saskatchewan species at risk colouring books.

From 2008-2010, SOS worked with local, non-profit community groups to put on the CADs. This had several benefits, including providing an opportunity for the local group to fundraise, increasing the chance of community members attending each CAD, increasing awareness of the CAD, and giving SOS staff more time to visit with landowners and participants (instead of cooking). In recent years, staff have found that many groups have begun to decline catering work due to food health and safety concerns. The 2014-15 CADs were catered by local Eastend, Elbow, and Val Marie caterers. While SOS would like to continue working with local groups to put on the meals, it may be more difficult to find groups willing to do this kind of work in the future.

Appreciation events were initiated in 2003 as a Steward Appreciation Barbeque and included an informal talk with landowners over a barbecued lunch and an opportunity for attendees to meet an educational Burrowing Owl. These evolved into Conservation Awareness Day events to include information transfer in a half-day workshop format, along with a lunch or supper and, when possible, a trip to a local habitat enhancement site. With the exception of 2012, the events have involved one or more other conservation organizations since 2008. Attendance has varied but on average has been high since 2009-10, possibly due to these events becoming better known, including topics of greater interest, and often being co-hosted with another conservation agency (Table 7).

#### **Recommendations:**

- Continue to deliver Conservation Awareness Day events in SOS program target areas and involve other conservation agencies. Include SOS presentations and other informational sessions of interest to landowners in the area, an educational Burrowing Owl, and provide a meal.
- Have the meal catered by a local, non-profit community group where possible.
- Continue to incorporate information or activities geared towards children or youth at future Conservation Awareness Day events to help spread awareness about species at risk and conservation to younger generations as well.

### 2.3.5 Mail-outs

In 2014-2015, three mail-outs were sent to all RPR participants.

- **Rare Plant Rescue Spring Update** – All RPR participants received a program update letter in June 2014 (Appendix 5). The goal of this mail-out was to notify participants of program news, renew the call for reporting rare plant sightings, and inform participants about upcoming events that may be of interest to them.
- **Stewards of Saskatchewan Winter Greeting** – In January 2015, all SOS participants (including RPR members) were mailed a Winter Greeting letter along with the SOS program updates and events list (Appendix 5).
- **Native Plant Society of Saskatchewan's *Native Plant News* newsletter** – In the summer of 2012, the NPSS began providing a free subscription to their quarterly newsletter, *Native Plant News* (NPN), to all RPR participants. To respect the privacy of RPR participants, newsletters were delivered to the RPR coordinator who mailed them out to participants directly, in accordance with Nature Saskatchewan's policy to not share participant contact information without permission. In 2014-15, three editions of NPN (Spring 2014, Summer 2014, and Fall 2014) were provided by NPSS and mailed to all participants. The Spring and Summer 2014 editions were mailed out with the Spring Update, and the Fall 2014 edition of NPN was mailed out along with the Winter Greeting mailout.

## 2.4 Stewardship Recognition

### 2.4.1 Gate Signs and Certificates

It is important to recognize good stewardship of our natural heritage so that landowners will be aware that their efforts are appreciated, and to provide further encouragement. One of the principle ways that RPR landowners who are protecting land that supports rare plants (at the time of joining the program) are recognized is through the opportunity to receive a gate sign. In addition, all RPR stewards, including those protecting land that potentially supports rare plants, are recognized through a certificate.

In 2014-15, five certificates were distributed to RPR participants: four to new participants that joined in 2014 (the fifth did not want a certificate) and one to a participant that signed in 2014 after being a Verbal participant since 2003.

In 2014-15, two gate signs were distributed to RPR participants that signed in 2014 and had rare plants found on their land.



Figure 19. Rare Plant Rescue gate sign (S. Vinge).

In 2004, RPR gate signs (Figure 19) and recognition certificates (Appendix 6) were developed. Saskatchewan artist Gary Field designed a pen and ink graphic for use on the gate signs and certificates and also for use as a logo for the RPR program.

**Table 7. Attendance at Conservation Awareness Day events from 2003-2004 to 2014-2015.**

<b>Year</b>	<b>Location</b>	<b>Day</b>	<b>Date</b>	<b>Attendees</b>
2003-04	Weyburn	Tuesday	June 24	6
2003-04	Assiniboia	Wednesday	June 25	7
2004-05	Bengough	Friday	August 27	11
2005-06	Assiniboia	Tuesday	August 16	11
2005-06	Outlook	Wednesday	August 17	21
2005-06	Cabri	Thursday	August 18	11
2006-07	Leader	Tuesday	July 25	11
2006-07	Bengough	Wednesday	July 26	13
2006-07	Midale	Thursday	July 27	14
2007-08	Elrose	Tuesday	June 19	12
2007-08	Milestone	Tuesday	October 2	22
2007-08	Moose Jaw	Tuesday	February 12	23
2007-08	Gull Lake	Wednesday	March 19	11
2008-09	Rockglen	Tuesday	October 21	18
2008-09	Dundurn	Tuesday	March 3	12
2009-10	Moose Jaw	Tuesday	July 7	52
2009-10	Khedive	Tuesday	July 14	30
2009-10	Spring Valley	Wednesday	July 15	34
2009-10	Claydon	Tuesday	November 17	46
2010-11	Shamrock	Wednesday	July 21	25
2010-11	Central Butte	Wednesday	November 3	21
2010-11	Claydon	Wednesday	November 10	24
2011-12	Avonlea	Tuesday	June 28	21
2011-12	Outlook	Thursday	October 27	20
2011-12	Claydon	Wednesday	November 30	31
2012-13	Cabri	Tuesday	July 17	17
2013-14	Wood Mountain	Thursday	July 18	23
2013-14	Milestone	Thursday	November 28	32
2014-15	Eastend	Thursday	July 17	40
2014-15	Elbow	Thursday	December 4	18
2014-15	Val Marie	Thursday	February 26	40

Four rare plants were selected for the graphic based on aesthetics, distribution across the province, and significance. The Small White Lady's-slipper, extirpated from Saskatchewan, represents the eastern part of the province and also the fate that RPR hopes to help avoid for other rare species in the province. Small-flowered Sand-verbena represents the western part of the province and along with the Western Spiderwort, represents the endangered and threatened species of Saskatchewan. Small Lupine represents the plants that are on the candidate list for status in Saskatchewan.

#### **2.4.5 Graduated Rewards Program**

In 2010-11, the Stewards of Saskatchewan introduced a Graduated Rewards Program to recognize program participants for their continued dedication to the conservation of species-at-risk habitat. Rewards were provided to all SOS program participants who have been a part of OBO, RPR, SFS or POS for five, ten, fifteen or twenty years. Field guides were provided to those landowners who have participated in an SOS program for five years, Nature Saskatchewan travel mugs were given to those who joined ten years ago, a field guide and Nature Saskatchewan travel mug were sent to those who have been involved in SOS programming for fifteen years, and a set of binoculars was given to those who have been SOS participants for twenty years. Due to funding limitations, no graduated rewards were given out in 2014-15, and the graduated rewards program has been discontinued for the foreseeable future.

#### **Recommendations:**

- Re-instate the graduated rewards program if funding can be secured in the future.

#### **2.5 Rare Plants and Ranchers Program**

In 2012, the NPSS launched the Rare Plants and Ranchers program. Rare Plants and Ranchers was created to build upon the RPR program, by working with its base of stewards and the rare plant habitat they are conserving. Participants in this program receive site-specific beneficial management plans for plant species at risk (SAR), developed by a Professional Agrologist using an ecosystem-based, multi-species approach. This program will improve plant species at risk habitat, and build upon the search and monitoring activities of RPR by updating known occurrence data and contributing new occurrence data.

Participation is free, and open to RPR participants who have one or more of the following federally listed plant species at risk on their land:

- Buffalograss (*Bouteloua dactyloides*)
- Dwarf Woolly-heads (*Psilocarphus brevissimus* var. *brevissimus*)
- Hairy Prairie-clover (*Dalea villosa* var. *villosa*)
- Slender Mouse-ear-cress (*Transberingia bursifolia* ssp. *virgata*)
- Small-flowered Sand-verbena (*Tripterocalyx micranthus*)
- Smooth Goosefoot (*Chenopodium subglabrum*)
- Tiny Cryptanthe (*Cryptantha minima*)
- Western Spiderwort (*Tradescantia occidentalis* var. *occidentalis*)



New Rare Plants and Ranchers participants are recruited by the RPR coordinator from existing RPR participants; alternatively, eligible landowners can contact the coordinator and sign a Voluntary Stewardship Agreement to join RPR and enter the program. To increase the program's reach, any interested landowners with federally-listed plant species on their land can now participate in the program, even if they have not signed a voluntary stewardship agreement with RPR.

In the summer or fall, the NPSS visits landowners to conduct an interview (Appendix 7) to determine current and historical factors (e.g., grazing and fire regimes, invasive species and other threats, etc.) to give context to the current state of the land and its species at risk. The NPSS then conducts a site assessment to determine the condition of the land parcel that has rare plants present. The site assessment protocol includes range and/or riparian health assessments, photo plots, population assessments of invasive species and species at risk, and takes into consideration any other factors relevant to the current condition of the land. The following winter, the NPSS synthesizes the information gathered at the interview and site assessment into a site-specific, comprehensive, beneficial management plan for plant species at risk.

The program has been well-received: five RPR landowners participated in this program in 2012, six participated in 2013, and 6 participated in 2014. Management plans for the 2012 participants were distributed in summer 2013, and the management plans for the 2013 participants will be distributed soon. The NPSS is currently compiling management plans for the 2014 participants, which are scheduled to be delivered to the landowners by summer of 2015. Management plans are adapted from Species at Risk Conservation Plans developed by the Alberta-based organizations Multiple Species at Risk (MULTISAR) and Operation Grassland Community (OGC) for landowners in Alberta's Grassland Natural Region. Suggestions in the management plans follow Prairie Plant Species at Risk Recovery Team recommendations, are based on best practices, and use a holistic approach, balancing the needs of the landowner's operation with the needs of rare plants and plant habitat. See Appendix 8 for an example of one of the Rare Plants and Ranchers management plans (excluding appendices).

Once landowners receive their management plan and if they decide to implement any suggested changes, the NPSS and RPR will provide on-going logistical support. NPSS secured funding for 2013 to 2015 to help landowners implement certain management changes on a cost-sharing basis. As of March 2015, at least one of the 2014 Rare Plants and Ranchers participants had been in contact with NPSS about acquiring funding to implement some of the suggested management practices. We anticipate that these management changes, and hopefully others, will be implemented in summer of 2015, although some landowners may take longer to implement recommended changes.

RPR conducts monitoring of rare plant populations on the participant's land twice over the course of their participation in Rare Plants and Ranchers. The rare plant population is first monitored before the participant receives their management plan, or before they adopt any management recommendations. After participants have received their management plans and recommendations have been implemented, ongoing monitoring by NPSS (site assessment) and RPR (rare plant monitoring) will reassess the land and determine any effects of recommendations on species at risk and habitat. This is an adaptive management process, meaning that, as necessary, management practices would be adjusted accordingly.

There are many benefits we anticipate to arise from this project. Landowners benefit by receiving a customized, comprehensive management plan for species at risk, free of charge. The NPSS also provides access to match funding and ongoing logistical support as landowners implement suggestions. Plant species at risk and their habitat will benefit as threats are reduced or eliminated, and beneficial behaviors are adopted or increased. Additional species at risk habitat may also be legally secured as information and logistical support on securing a conservation easement (CE) will be provided to participants. RPR participants all receive information on CEs when they join RPR, however, participation in the Rare Plants and Ranchers program is another valuable opportunity to discuss conservation options with landowners. In January 2014, information on Rare Plants and Ranchers was added to the Rare Plant Rescue webpage, to provide further information to individuals who may be interested in participating in the program. In summer 2014, a Rare Plants and Ranchers fact sheet was added to all new RPR toolboxes to ensure that participants are aware of this initiative.

### **Recommendations:**

- Conduct follow-up calls or visits with the six participants from 2014 after they have received their management plans.
- Maintain contact with the Rare Plants and Ranchers participants from 2012 and 2013 and with NPSS to keep track of if and when any management recommendations are implemented.
- Engage new landowners for the 2015 field season by calling current eligible RPR participants, and continuing to advertise the Rare Plants and Ranchers program through the SOS newsletter, *Nature Views*, *Native Plant News*, Nature Saskatchewan website, and other outlets. The NPSS target is to have 2560 new acres added to the Rare Plants and Ranchers program in 2015.

### **2.6 Conservation Easements**

In May 2014, Stewards of Saskatchewan (SOS) staff attended a training and information session held by Nature Conservancy of Canada (NCC) to help SOS staff become more knowledgeable about conservation easement practices, and therefore, be better equipped to answer landowner questions. This enabled SOS staff to better promote easements on landowner visits. In the fall of 2010, the SOS program coordinators developed a more scripted and carefully worded discussion on conservation easements to be used for SOS staff training, and to be included in the Habitat Stewardship Coordinator and SOS summer staff training manuals.

Conservation easements were promoted to landowners during visits, and through information provided in the SOS Conservation Toolbox (Section 2.3.2). In addition, NS promotes easements to its members and others through articles in the NS newsletter, *Nature Views*. Although NS receives a small number of calls from those possibly interested in conservation easements, most people likely directly contact agencies that negotiate conservation easements. A number of SOS participants have signed easements with conservation agencies in recent years; these stewards were provided

information about easements through our SOS programs which may have influenced their decisions.

Nature Saskatchewan promotes the protection of native habitat through conservation easements, a program in Saskatchewan enabled through *The Conservation Easements Act 1996*. Stewards of Saskatchewan landowners and members of NS have been identified as people who may be interested in undertaking an easement because of their demonstrated commitment to conservation. A conservation easement enables a private landowner to legally conserve native habitat or habitat of ecological importance in perpetuity while continuing to own and manage the land. When a landowner signs a conservation easement agreement, the landowner agrees to restrict the type and amount of land use on the property to conserve its natural features. The conservation easement is registered on the land title and transfers to any new owners. Initially, all conservation easements in Saskatchewan were donated by the landowner, with the possibility of receiving a tax receipt for the change in value of the land due to the easement. However, in order to encourage more easements, currently and since the early 2000s, most are paid easements with the landowner receiving a payment related to the change in value of the land.

Nature Saskatchewan actively undertook securing of conservation easements from 1998-2005, during which time nine conservation easement agreements were signed with seven landowners, conserving a total of 2,035 acres. Since 2006, landowners that express interest in conservation easements to NS are referred for more information and the negotiation process to one of the agencies more active in securing easements, and the landowner is given the option to have NS as the easement holder if a conservation easement agreement is signed.

**Recommendations:**

- Meet annually with the NCC for a training session on conservation easements for SOS staff, especially when there is a change in SOS staff (e.g., once summer staff begin their work terms).
- Actively promote easements on landowner visits, and continue to refer interested landowners to NCC and other qualified agencies for further information and the negotiation process. Keep in contact with referred landowners.
- Conduct rare plant searches and monitoring on conservation easements held by Nature Saskatchewan and other agencies where these are in locations that may support target species.

### 3 SITE IDENTIFICATION AND POPULATION MONITORING

Rare Plant Rescue conducts searches for previously unknown occurrences of plant species at risk, and also monitors known populations on privately owned or privately managed land. These activities (particularly searches) form the basis for stewardship with landowners, but also provide data that can be used in continual assessment of the status of the species. From 2008 to 2012, RPR had a separate search team of staff who primarily focused on conducting searches for new rare plant occurrences. The other RPR team conducted population monitoring on lands already participating in the RPR program. This two-team approach allowed RPR to search new lands, contact potential landowner participants, as well as monitor known populations. In 2014, due to funding limitations, only one summer staff was hired to assist the RPR program. Together, the RPR coordinator and the summer assistant conducted rare plant searches, monitoring, and visits with potential and current landowners. Field activities were carried out during the growing season, from the first week of June to the end of August. Certain species are targeted during different times of the growing season, depending on when they are most detectable (Henderson 2009; related to flowering and fruiting times; Table 8).

**Table 8. Flowering and fruiting times of RPR target species (Henderson 2009).**

Species (Latin)	Species (Common)	Flowering Time	Fruiting Time	Time of Highest Detectability
<i>Bouteloua dactyloides</i>	Buffalograss	Late June - July	July - Sept.	Late Aug. - early Sept.
<i>Chenopodium subglabrum</i>	Smooth Goosefoot	Late June - July	July - Aug.	--
<i>Cryptantha minima</i>	Tiny Cryptanthe	June - July	July - Sept.	June - Aug.
<i>Cypripedium candidum</i>	Small White Lady's-slipper	May - June	--	May
<i>Dalea villosa</i> var. <i>villosa</i>	Hairy Prairie-clover	July - Aug.	Aug. - Sept.	Late July
<i>Psilocarphus brevissimus</i>	Dwarf Woolly-heads	June	June	June
<i>Tradescantia occidentalis</i>	Western Spiderwort	Late June - July	July	Late June - early July
<i>Transberingia bursifolia</i>	Slender Mouse-ear- cress	Late May - June	May-June	Late May - early June
<i>Tripterocalyx micranthus</i>	Small-flowered Sand- verbena	June - Aug.	July - Aug.	June - Aug.
<i>Ambrosia acanthicarpa</i>	Bur Ragweed	Aug. - Oct.	--	--
<i>Astragalus kentrophyta</i> var. <i>kentrophyta</i>	Prickly Milk-vetch	June - July	Aug. - Sept.	--
<i>Atriplex powellii</i>	Powell's Saltbrush	June - July	--	--
<i>Botrychium campestre</i>	Prairie Dunewort	May - June	n/a	May - June
<i>Camissonia andina</i>	Upland Evening- primrose	June - July	--	--
<i>Lupinus pusillus</i> ssp. <i>pusillus</i>	Small Lupine	June (July)	--	June
<i>Shinnersoseris rostrata</i>	Beaked Annual Skeletonweed	Aug. (July - Sept.)	--	--

#### 3.1 Selecting Search Sites

RPR selects sites to search for target plant species at risk using the following strategies:

- Checking historic records as provided by the Saskatchewan Conservation Data Centre (SKCDC)

- Using suggestions from Environment Canada of sites that have a high probability of supporting plant species at risk
- Using reports from other agencies such as the Native Plant Society of Saskatchewan and the Nature Conservancy of Canada
- Acting on reports from the public (Section 0)
- Searching areas adjacent to historic or known sites with similar or suitable habitat
- Checking sites that have had new occurrences reported to the SKCDC in the past few years from consulting agencies.

Search sites are prioritized each season, primarily due to time and budget constraints. Privately owned lands are the priority for RPR searches and monitoring, followed by privately managed lands and public lands. RPR does not conduct search or monitoring activities on federal lands (e.g., federal community pastures, national wildlife areas and national parks). Priority of lands to search is also based on the target species (Section **Error! Reference source not found.**). Sites (generally categorized by quarter section) are considered “new” if they have not been previously searched by RPR.

For the majority of search sites, RPR initiates contact with the landowner/manager, often through cold calls (Section 2.3). Many people are unaware of historic records of plant species at risk on their land, and/or unaware they have habitat that could support a rare plant species. Receptiveness to RPR cold calls varies, and occasionally landowners withhold permission for RPR to access their lands. RPR does not conduct searches or monitoring without permission to do so from the landowner, therefore, although some sites may be a high priority for RPR activities, they may not be searched in the year of the request. Permission is requested one to several weeks before searches or a visit is to occur.

#### **Recommendations:**

- Continue working with Environment Canada to coordinate activities, and for suggestions of high priority sites to visit for occupancy searches.
- Verify sites reported to RPR to have, or potentially have rare plants.
- Verify new sites reported to have rare plants to the SKCDC in the past few years.

### **3.2 Occupancy Search and Population Monitoring Methods**

Rare Plant Rescue implemented its search and monitoring program (developed in 2007) in 2008, and has continued with it through 2014. Protocols follow standardized methodologies for searching for, and monitoring plant species at risk, so that data collected can add to the scientific knowledge base of each species and its distribution. The RPR occupancy search protocols and population monitoring methods follow the guidelines laid out by D.C. Henderson of Environment Canada (2009; Appendix 9). RPR continues to work with Environment Canada and to use these protocols as they are updated so that RPR methods are based on the most up-to-date information. Although RPR does not conduct general floristic surveys to look for any rare plants on a given parcel of land,

RPR methods are consistent with the general guidelines of the Standardized Methodology for Surveys of Rare Plants (Bizecki Robson 1999).

All data collected in the field are recorded on data sheets (Appendix 10) with a GPS, and are later entered into spreadsheets and the RPR database. RPR records the locations of rare plant species using a GPS, and captures photos of the site, plants, and habitat. Notes are also made on occurrence location and distance to reference points to facilitate locating the site and plants during future visits.

### **3.3 Data Management and Use**

In early 2011, the development of the Rare Plant Rescue Microsoft Access database was completed, and all past data that were not included in the original database were added in. In early 2012, a contractor was hired to create a web-based SOS database to house all information from the SOS programs. The database structure was completed in December 2012. The database is now (password protected) online, and contains data up to and including 2012. However, these data still need to be verified for completeness, and some additional fixes to the database appear to be necessary. This new database will address the glitches that existed with the other SOS program databases, and eliminate duplication between the SOS programs (e.g., if a landowner is a participant in more than one program, then his or her information would have been stored in multiple databases). In the new database, information will be stored about SOS (including RPR) contacts including participants and other interested landowners, species at risk (including rare plant) locations and populations, visits and materials distributed, and SOS (including RPR) communications. It will also house information pertinent to the other SOS programs (Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, and the SOS banner program) but not necessary for the RPR program, such as habitat enhancement information. All information is standardized, making it easily accessible and allowing for quick summaries to be created. This will facilitate both future planning and reporting.

Each year, Rare Plant Rescue information is provided to the Saskatchewan Conservation Data Centre (SKCDC); in 2014, records were transferred in October. Nature Saskatchewan works with the SKCDC on projects of common interest, and shares species information with the SKCDC. With landowner permission, new sites of rare plants are provided to the SKCDC for their database; however, landowner contact and other information are not shared. We also notify the SKCDC of historic records in their database that we have checked and what was found. Information on the presence or absence of plant species, the location of the plants, population numbers, and site conditions are shared.

The primary role of the SKCDC is to inventory, research and document the province's biological diversity in order to provide information on Saskatchewan's rare plants, animals, and natural communities. Information housed at the SKCDC is available to selected users, including to environmental developers who require the information to follow regulations and guidelines. Each year, the SKCDC receives numerous requests from industry concerning development projects such as oil and gas exploration and pipeline construction. For each request, the company is provided with a list of known occurrences and the status of rare plants and/or animals in the specified quarter section, township and range. If more specific information is needed on RPR target rare

plant species (e.g., year last reported), the company can contact RPR at Nature Saskatchewan. RPR did not receive any requests for information from industry in 2014.

### **Recommendations:**

- Continue working with database contractors to ensure the new database is functional and meets the needs of the SOS programs.
- If funding permits, hire a contractor to input all outstanding SOS data into the new database and to verify all database entries for completeness and correctness.
- Develop an SOS database user's manual.
- Enter new information into the existing Microsoft Office database as it is collected, and continue to provide land locations of species at risk to the SKCDC in a timely manner.

### **3.4 Land Management Survey**

In 2008, RPR piloted a land-management survey that was improved in 2009 and 2010. This survey was developed in place of an annual landowner population census (which is difficult for reasons discussed below), because annual landowner input is very important to the monitoring of rare plant habitat, and thus, indirectly to population persistence.

Since its inception in 2002, Rare Plant Rescue has strived to develop a landowner-driven census similar to that conducted by Operation Burrowing Owl, Shrubs for Shrikes, and Plovers on Shore. The census used by these programs tracks the presence and absence of the target species at enrolled sites, as well as changes in population size and site quality. There are numerous obstacles that make this type of census impractical for RPR.

In most circumstances it is not feasible for landowners to locate and monitor rare plant populations occurring on their land. Population monitoring requires basic plant identification skills, and although one can be taught to identify rare plants, the time and inclination to learn, as well as access to resource materials, are required. Although the degree of skill required to correctly identify and survey plant populations might limit some landowners, the main barrier to landowner involvement is that the time required to monitor plant populations exceeds the amount that most landowners are able to devote.

In addition, plants exhibit vastly different life cycles than do mammals and birds. In many instances, part or all of a population of rare plant species may be hidden as seeds or underground parts for years at a time. Given this fact, a decline in number or even the complete absence of visible individuals for many years, may not necessarily indicate a serious change in the population.

For the above reasons, rather than relying on landowner observations, RPR began conducting population monitoring in 2008 (Section 0).

### **3.4.1 Goals and Development**

An RPR land-management survey was first developed in 2008 to gather information about land-use, site, and season conditions for lands having habitat capable of supporting a rare plant species. Goals of the survey include stimulating annual, active landowner participation, especially in years when a visit cannot be made, and the gathering of local, site-specific information for each individual growing season. The distribution of many rare plant species is poorly understood, and this information together with data collected during population monitoring will help develop the knowledge base of rare plant biology and distribution.

No landowner surveys were mailed out in 2012 or 2013, as the RPR Coordinator decided to re-work the survey to improve the value of the data collected and hopefully increase response rates. In 2014, it was decided that instead of a mail-out survey format, information on site and land management would be collected during visits with current RPR participants. This will not allow data to be collected annually for each participant, but will hopefully result in honest answers and detailed data that can be used in conjunction with long-term monitoring. Additionally, asking questions about land management, etc. during one-on-one visits allows for landowners to voice their concerns or ask questions, and provides staff with an opportunity to address these concerns, provide additional resources or information, etc. A list of questions will be finalized in the spring of 2015, to be used during landowner visits in 2015-16.

RPR stewards that participate in the Rare Plants and Ranchers program are interviewed by the Native Plant Society of Saskatchewan's Professional Agrologist to obtain information on the site, site history, land management, etc. (Appendix 7). This information is in turn provided to Rare Plant Rescue, and could be used in conjunction with on-going occurrence monitoring, and/or could be used as a reference when asking questions during visits with RPR participants.

#### **Recommendations:**

- Formalize a list of questions (using common topics of discussion from past visits and the Rare Plants and Ranchers interview questions as guides) to ask RPR potential, new, and current participants during one-on-one landowner visits. Questions for new participants could vary slightly from those asked of current participants to reduce redundancy.
- Send out a landowner questionnaire (similar to the one sent out in 2013) periodically (e.g., every 3-5 years), so that SOS programs are continually evaluated, and the reception of new SOS initiatives can be gauged and the initiatives can be modified accordingly.

### **3.5 Target Areas and Species for Site Searches and Population Monitoring**

In 2014, Rare Plant Rescue conducted occupancy searches and/or monitoring in the following landscape areas:

- Beechy and Coteau Hills
- Bindloss, Eston, Goose Lake, Griffen, Souris River, and Wild Horse Plains
- Cypress Upland



Search and monitoring activities focused on the following species, with other rare plant species found incidentally during these activities:

- Slender Mouse-ear-cress;
- Small-flowered Sand-verbena;
- Dwarf Woollyheads;
- Smooth Goosefoot;
- Tiny Cryptanthe;
- Plain’s Grape-fern and
- Buffalograss.

While RPR has always been observant to the potential presence of other target species, in past years each search has had only a single target species. In 2011, RPR initiated searches for pairs of target species at the same time (i.e., Western Spiderwort and Smooth Goosefoot, Tiny Cryptanthe and Smooth Goosefoot, and Hairy Prairie-clover and Smooth Goosefoot), as recommended by the Prairie Plant Species at Risk Recovery Team chair. In addition, Small-flowered Sand-verbena was searched for as a target species if suitable habitat was encountered during Tiny Cryptanthe and Smooth Goosefoot surveys. In 2014, Smooth Goosefoot and Small-flowered Sand-verbena were searched for together in suitable habitat. Specific information on the size of the populations (determined most accurately through monitoring, but also estimated during search activities) is recorded in the RPR database.

**Occupancy searches** in 2014 focused on Slender Mouse-ear-cress, Small-flowered Sand-verbena, Smooth Goosefoot, Dwarf Woollyheads, Tiny Cryptanthe, and Buffalograss. A total of 30 sites (quarter sections or portions of quarter sections having suitable habitat) were searched (Table 9). Of these, one was partially searched in 2011 and finished in 2014, and three were started in 2014 but not completed. Eleven of these quarter sections contained suitable habitat that was searched for Dwarf Woollyheads, but not all areas of suitable habitat within those quarters were mapped and/or searched. This will be done in future years of searching (Table 9). The occupancy searches yielded nine new sites with target species. Smooth Goosefoot was found on two new sites in the Goose Lake Plain landscape area, with Small-flowered Sand-verbena also found on one of those sites. Dwarf Woollyheads were found on seven quarter sections in the Wild Horse Plain landscape area. No new occurrences of Slender Mouse-ear-cress or Tiny Cryptanthe were found in 2014.

**Table 9. Details of Rare Plant Rescue occupancy searches for target species in 2014.**

Target Landscape Area	Target Species	Total # of Sites Searched	# of New Sites Searched (of Total)	# Sites Where Target Species was Found
Bindloss Plain	Slender Mouse-ear-cress	4	3/4	0
	Tiny Cryptanthe	1	1/1	0
Coteau Hills	Slender Mouse-ear-cress	4	4/4	0
Cypress Upland	Dwarf Woollyheads	2	2/2	0
	Tiny Cryptanthe	3	3/3	0
Eston Plain	Small-flowered Sand-verbena	4	4/4	0

Goose Lake Plain	Small-flowered Sand-verbena/Smooth Goosefoot (Joint)	2	2/2	1 with SFSV + SG, 1 with SG only
Souris River Plain	Buffalograss	1	1/1	0
Wild Horse Plain	Dwarf Woollyheads	9	9/9	7
<b>TOTAL</b>		<b>30</b>	<b>29/30</b>	<b>9</b>

An RPR occurrence (which approximates a Source Feature in NatureServe [J. Keith, SKCDC pers. comm 2011]) includes one or more plants of a single species that share a point or polygon in space. For perennials (e.g., Hairy Prairie-clover), a distance of 30 m is used to separate one occurrence from another, unless there is a significant change in habitat between individuals that are less than 30 m and greater than 10 m apart (e.g., shrub patch, ridge, etc.). Buffalograss is a perennial that is an exception to this guideline. The edges of a Buffalograss clone are typically well-defined and a distance of 5m is more suitable to separate occurrences. RPR currently uses a distance of greater than 5 m to separate occurrences of annuals and biennials (e.g., Slender Mouse-ear-cress). However, to be consistent with current protocols used by the Canadian Wildlife Service (C. Neufeld, pers. comm. 2014), going forward RPR will use a distance of 30 m to separate occurrences of annual or biennial species. RPR staff found new occurrences (i.e., occurrences not previously known to RPR, and usually not known to the Saskatchewan Conservation Data Centre or the Canadian Wildlife Service) of Plain’s Grape-fern, Small-flowered Sand-verbena, Smooth Goosefoot, Beaked Annual Skeletonweed, Buffalograss, Small Lupine, and Dwarf Woollyheads during searches or incidentally in 2014 (Table 10).

**Table 10. New occurrences of plant species at risk found by Rare Plant Rescue in 2014.**

Target Landscape Area	Species	# of Sites Having New Occurrences	# of New Occurrences on Those Sites	Notes
Bindloss Plain	Small Lupine	2	8	Found incidentally while searching for Slender Mouse-ear-cress.
Coteau Hills	Plain's Grape-fern	1	2	Found incidentally while walking between Slender Mouse-ear-cress search transects.
Goose Lake Plain	Small Lupine	5	13	Six occurrences were found incidentally during habitat searches/meanders for Smooth Goosefoot and Small-flowered Sand-verbena. Seven occurrences were found incidentally while monitoring Smooth Goosefoot and Small-flowered Sand-verbena occurrences.
	Beaked Annual Skeletonweed	2	3	Two occurrences were found incidentally during a habitat search/meander for Smooth Goosefoot and Small-flowered Sand-verbena. The other occurrence was found incidentally while monitoring Smooth Goosefoot and Small-flowered Sand-verbena.

	Small-flowered Sand-verbena	2	12	One occurrence was found incidentally while monitoring Smooth Goosefoot and Small-flowered Sand-verbena. The other 11 occurrences were found during a habitat search/meander for this species on one quarter section.
	Smooth Goosefoot	3	18	Thirteen occurrences were found during habitat searches/meanders for this species and Small-flowered Sand-verbena on two quarter sections. The other five occurrences were found incidentally while monitoring Smooth Goosefoot and Small-flowered Sand-verbena on one quarter section.
Griffin Plain	Buffalograss	4	8	All eight occurrences were found incidentally while monitoring other Buffalograss occurrences on the same quarter sections.
Wild Horse Plain	Dwarf Woollyheads	7	15	All 15 occurrences were found during habitat searches/meanders for this species.

**Population monitoring** in 2014 was conducted for Slender Mouse-ear-cress, Plain’s Grape-fern, Small-flowered Sand-verbena, Smooth Goosefoot, Buffalograss, and Mingan’s Moonwort (Table 11). We monitored 65 previously-known occurrences on 21 sites. All sites had been previously reported to have rare plants. RPR was able to relocate all of the occurrence locations, and target rare plants were found at 55 of the 65 previously-known occurrences, on 13 of the 21 sites.

Like in 2012 and 2013, the summer of 2014 did not seem to present good growing conditions for Slender Mouse-ear-cress. No new occurrences of this plant were found on the eight quarter sections that were searched for this species, and we saw this species (a single plant) at only one of the nine previously-known occurrences we visited. However, Slender Mouse-ear-cress might have been present at these sites, but would have appeared absent if individuals were in their first year of growth (i.e., basal rosettes), or if they simply did not germinate at some sites (C. Neufeld, pers. comm., 2012). If the former situation is true, plants would have been extremely difficult to find, and the latter would have resulted in no plants present in 2014. Growing conditions appeared to be good for Smooth Goosefoot and Small-flowered Sand-verbena, with all Smooth Goosefoot occurrences that were visited having plants, and all but one of the Small-flowered Sand-verbena occurrences having plants present. Dwarf Woollyheads searches were conducted with the Saskatchewan Conservation Data Centre. Due to dry conditions in southwest Saskatchewan, the majority of Dwarf Woollyheads that were found were very small (< 1 cm tall).

For all occurrences where plants were present, monitoring consisted of plant counts and delineation of the occurrences. We also took photos of the occurrences, documented the phenology of the plants (e.g., flowering, senescing, etc.), and assessed the health of the plants (e.g., good, poor, etc.). For Buffalograss, we delineated the patch rather than counting individual plants/stems. Monitoring the Mingan’s Moonwort is not within the scope of our priorities; however, this occurrence was monitored by a volunteer.

**Table 11. Details of Rare Plant Rescue population monitoring in 2014.**

Landscape Area of Site	Target Species	Target Species Located? (Yes/No)	Notes
Bindloss Plain	Slender Mouse-ear-cress	Yes	Occurrence locations (9) were found. Eight occurrences had no plants present. One occurrence had a single plant.
	Plain's Grape-fern	Yes	Occurrence location (1) was found. Five plants were present.
Goose Lake Plain	Small-flowered Sand-verbena	Yes	Occurrence locations (13) were found. Plants were present at 12 of 13 occurrences. Plants were counted at all occurrences and the area of each occurrence was delineated (where appropriate).
	Smooth Goosefoot	Yes	Occurrence locations (4) were found. Plants were present at all four occurrences. Plants were counted at all occurrences and the area of each occurrence was delineated (where appropriate).
Griffin Plain	Buffalograss	Yes	Occurrence locations (37) were found. Plants were present at all occurrences. All occurrences were delineated. Four of the occurrences overlapped with each other, so they were combined into a single occurrence.
Other	Mingan's Moonwort	No	Monitored by a volunteer. Occurrence location was found, but no plants were present.

Search and monitoring effort is the number of hours spent on field activities for each species. These data allow the effort to be quantified for all RPR surveys. A summary of effort is found in Table 12. Note that the hours shown do not constitute cumulative field hours, since, for example, the search effort for Western Spiderwort was also recorded as the search effort for Smooth Goosefoot since both species were being targeted during the same search.

**Table 12. RPR search and monitoring effort for each target species in 2014.**

Target Species	Search Effort (person-hours)	Monitoring Effort (person-hours)
Buffalograss	12	70.5
Dwarf Woollyheads	56	0
Plain's Grape-fern	0	0.5
Slender Mouse-ear-cress	198	20
Small-flowered Sand-verbena	30	16
Smooth Goosefoot	24	9
Tiny Cryptanthe	106	0

## **Recommendations:**

- Continue searching and monitoring activities in 2015. Train SOS summer assistants on search and monitoring techniques. When possible send the students out as a team for two-person transect searches, and whenever possible have the RPR coordinator and assistant conduct monitoring on sites nearby for safety and logistical reasons. Use skilled volunteers where possible when monitoring to ensure no work is conducted alone in remote locations.
- Work with Environment Canada, the Saskatchewan Conservation Data Centre, and other partner agencies to select priority sites to search, and follow up on species sightings that were previously reported by the public to RPR.
- Continue to work on the Slender Mouse-ear-cress, Small-flowered Sand-verbena, Tiny Cryptanthe, Dwarf Woollyheads, Buffalograss, Western Spiderwort, Hairy Prairie-clover and Smooth Goosefoot projects as provided by Environment Canada and as appropriate for conditions.
- If time permits and conditions are suitable, continue to conduct searches for Dwarf Woollyheads in 2015. While this species is only listed as Special Concern, it occurs in an area where RPR currently has only one participant and would serve as a good ambassador species to engage landowners in extreme southwestern Saskatchewan in conservation of prairie habitat for plant species at risk. Collaborate with the South of the Divide project to ensure RPR activities are not overlapping or redundant with theirs.

## **4. AWARENESS AND EDUCATION**

### **4.1 Promotion Through the Internet**

Since 2002, the RPR program has been promoted through Nature Saskatchewan's website, and in 2009 RPR received additional coverage through Picasa, a free photo sharing website. RPR is also promoted on social media sites through Nature Saskatchewan's Facebook page, Twitter feed, Instagram page, and YouTube channel.

#### **4.1.1 Nature Saskatchewan Website**

The Stewards of Saskatchewan (SOS) programs, including Rare Plant Rescue (RPR), have been promoted through the NS website since the website's creation in 2000. In September of 2012, the NS website was re-designed to be more user-friendly and appealing, while maintaining the content and resources that could be found on the old website. Like the other four SOS programs, online RPR content can be accessed by clicking on 'What We Do' then selecting the 'Stewards of Saskatchewan' webpage, and finally the 'Rare Plant Rescue' link on the left side. The SOS and RPR webpages contain information on the benefits of being a participant, a list and information on all 16 of our target plant species, a link to our Picasa photo album with target rare plant photographs, the contact information to report a rare plant sighting, and a description of our Conservation Awareness Day events. The page also includes a link to resource information for our stewards such as a digital version of *A Pocket Guide to the Rare Plants of Southern Saskatchewan*, the current SOS Newsletter/Update, and information about the Native Plant Society's Rare Plants and Ranchers program. A list of our current funders can be found by clicking on 'Who We Are' then selecting the 'Nature Saskatchewan Supporters' page (<http://www.naturesask.ca/who-we-are/nature-saskatchewan-supporters>).

The RPR webpage is updated at least four times throughout the year with outdated information being removed or changed, and with new and current documents (e.g., the SOS Newsletter) being added as they become available. Updates in 2014-2015 included new photos posted, and a reduction in text to simplify the webpage and to make it more appealing. From April 1, 2014 to March 31, 2015, Nature Saskatchewan's Stewardship webpage (<http://www.naturesask.ca/what-we-do/stewards-of-saskatchewan>) was viewed 1,836 times, and the RPR webpage (<http://www.naturesask.ca/what-we-do/stewards-of-saskatchewan/rare-plant-rescue>) was viewed 393 times.

#### **4.1.2 Picasa**

Picasa is a free image organizer and viewer for organizing and editing digital photographs, as well as a photo sharing website. The RPR Picasa account was created in 2009 to make digital photographs of rare plants available to the public for viewing. As mentioned above (Section 4.1.1) a link to Rare Plant Rescue's public gallery, which includes 12 photo albums, can be found on the RPR webpage under 'What are our rarest plants?'

### 4.1.3 Social Media

Rare Plant Rescue and the other SOS programs are promoted through Nature Saskatchewan's social media accounts, including our Facebook page (since November 2008), Twitter feed (since January 2010) and YouTube channel (since March 2013). Facebook and Twitter are monitored regularly and updated 3-5 times per week with posts about NS and SOS programming and events, as well as events by other local organizations and affiliates. As of March 31, 2015, Nature Saskatchewan's Facebook page (<https://www.facebook.com/NatureSask>) had 1,196 likes, the NS Twitter feed (<https://twitter.com/NatureSask>) had 1,490 followers, the NS Instagram account (<https://instagram.com/naturesaskatchewan/>) had 23 followers, and a newly created SOS promotional video on the NS YouTube Channel had 18 followers and 364 views (<http://www.youtube.com/channel/UCDYlv80ATfpeExkqvScuJ7g>). Throughout the 2014 field season, staff posted photos and information on Facebook and Twitter about the plant species at risk that we were searching for and monitoring, to encourage followers to let us know if they had seen those species. In 2014, a University of Regina student created a promotional video for Nature Saskatchewan, which is available for the public to see on our YouTube channel.

## 4.2 Promotion Through the Media and Agencies

In 2014, the Rare Plant Rescue program was promoted through a number of media formats, including newsletter and newspaper articles, news releases, and paid advertisements.

### 4.2.1 Hoot Line

Nature Saskatchewan advertises a toll-free HOOT line number (1-800-667-4668) for the reporting of species at risk to the Stewards of Saskatchewan programs. This has been a valuable tool for receiving sightings of Burrowing Owls and Loggerhead Shrikes and consequent recruitment of new participants into the Operation Burrowing Owl and Shrubs for Shrikes programs. While it is available for reports of rare plant sightings to RPR, its use for this purpose is very sporadic. In 2014, RPR did not receive any reports of rare plant sightings through the Hoot Line.

### 4.2.2 Articles

Six articles on rare plants, including plant species at risk, and RPR were published in newsletters, newspapers and magazines in 2014-15 (Appendix 11).

- "Rare Plants and Ranchers – enhancing habitat for rare plants" - in Nature Saskatchewan's Summer 2014 issue of *Nature Views* (circulated to approximately 850 members and 15 local naturalist groups)
- "Rare Plant Rescue: Conserving Southern Saskatchewan's Rare Plant Species" – in *Lake Country Magazine's* Spring/Summer 2014 issue (~10,000 subscribers)
- "Rare Plant Rescue: Adventures in the Field" – in the Native Plant Society of Saskatchewan's Fall 2014 issue of *Native Plant News* (circulated to approximately 250 primary subscribers and 80 RPR stewards)
- "Rare Plant Rescue Field Season Update" – in Nature Saskatchewan's Winter 2014 issue of *Nature Views*

- “Wolseley Nature Conservation Society Nature Trail” in Nature Saskatchewan’s Winter 2014 issue of *Nature Views*
- “Rare Plant Rescue: Adventures in the Field” – in the Stewards of Saskatchewan newsletter (circulated to all Stewards of Saskatchewan participants; Appendix 4)

#### **4.2.3 News Releases and Media Interviews**

Rare Plant Rescue sent out one news release in 2014 to 99 media outlets in central and southern Saskatchewan (Appendix 11):

- “Nature Saskatchewan gears up for the summer season’s ‘Search and Rescue’ - for rare and endangered plants” – detailing the rare plant searches Rare Plant Rescue would be undertaking in the 2014 field season.

This news release resulted in an interview on CBC Radio’s Blue Sky program (June 26<sup>th</sup>, 2014).

The Stewards of Saskatchewan sent out six additional news releases in 2014 (one to ~90 media outlets in central and southern Saskatchewan and five to 99 media outlets in central and southern Saskatchewan; Appendix 11).

- “Burrowing Owls: Operation Raise a Family” (May 26, 2014) - to spread awareness about Burrowing Owls, and to encourage people to report sightings of this species to Nature Saskatchewan.
- “Plovers in a dangerous time” (June 2, 2014) - to spread awareness about Piping Plovers and the threats to their habitat, and to encourage people to report sightings of this species to Nature Saskatchewan.
- “Impaling Prey on Barbed Wire: a “Shrieking” statement!” (June 9, 2014) - to spread awareness about Loggerhead Shrikes, and to encourage people to report sightings of this species to Nature Saskatchewan.
- “Piping Plover Chicks Hatching on Saskatchewan Beaches” (July 7, 2014) - to spread awareness about Piping Plovers, and to encourage people to report sightings of this species to Nature Saskatchewan.
- “Young ‘Butcherbirds’ Learning the Trade” (July 21, 2014) - to spread awareness about Loggerhead Shrikes, and to encourage people to report sightings of this species to Nature Saskatchewan.
- “Why did the Burrowing Owl Cross the Road?” (July 28, 2014) - to spread awareness about Burrowing Owls, to let people know to watch out for young owls while they are driving, and to encourage people to report sightings of this species to Nature Saskatchewan.

The “Burrowing Owls: Operation Raise a Family” news release resulted in three articles being printed. The first, titled the same as the news release, was in *The Press Review* (Eston, SK; circulation ~1000). The second was titled “Endangered owl find homes in pasture”, and was printed in the *Rosetown Eagle* (Rosetown, SK; circulation ~1900). The third one, also titled the same as the news release, was printed in *The Battlefords News Optimist* (North Battleford, SK; circulation 2356). This news release also resulted in a radio interview with Swift Current Golden West Radio (May 26, 2014).



The “Piping Plover Chicks Hatching on Saskatchewan Beaches” news release resulted in one printed article, with the same title as the news release, in *The Southwest Booster* (Swift Current, SK; circulation ~19,000).

The “Young 'Butcherbirds' Learning the Trade” news release resulted in two printed article and one on-air television interview. One printed article, with the same title, was in *The News Review* (Yorkton, SK; circulation ~6700). The other printed article was titled “Songbird sends critters scrambling for cover” and was printed in *The Western Producer* (western Canada; circulation 142,000). The on-air interview was on CTV News at Noon (Regina).

The “Why did the Burrowing Owl Cross the Road?” news release resulted in four printed articles. Three of the printed articles were titled “Burrowing Owl Population on the Decline”, and were featured in *The Moose Jaw Times Herald* (Moose Jaw, SK; circulation ~60,000), *The Triangle News* (Coronach, SK; circulation ~1000), and *The Prince Albert Daily Herald* (Prince Albert, SK; circulation 6000). The fourth article, titled “Juveniles are just learning to fly” was printed in *Yorkton This Week* (Yorkton, SK; circulation ~3400).

#### **4.2.4 Other Stewards of Saskatchewan Promotion**

The five Stewards of Saskatchewan programs (Operation Burrowing Owl, Shrubs for Shrikes, Rare Plant Rescue, and Plovers on Shore, and the Stewards of Saskatchewan banner program) together in 2014-2015 released six paid advertisements (Appendix 11). Five joint articles were published by the Stewards of Saskatchewan programs in 2014-15.

The paid advertisements were as follows:

- Wanted Ad with Habitat Enhancement – in *The Advance*, Special Earth Day Edition (22 April 2014).
- Wanted Ad with Habitat Enhancement – in *The Advance* (10 June 2014).
- Winter Greeting from Nature Saskatchewan – in *The Advance* (23 December 2014).
- Conservation Awareness Day in Val Marie Invitation – in *The Advance*, Special Winter Fun Guide (3 February 2015).
- Conservation Awareness Day in Val Marie Invitation (radio ad) – Golden West Radio Shaunavon 1490 CJSN (2 to 10 February 2015). This radio ad (and the ad we placed in *The Advance*) resulted in an article, titled “Conservation Awareness Day educates people young and old”, published in *The Advance* on March 3, 2015.
- Nature Saskatchewan’s logo placed in *The Advance* (circ. 4,500 weekly) published on March 24, 2015; proceeds to sponsor the Southwest Pee Wee Cyclones Provincial “B” Pee Wee female hockey final.

The five joint articles were:

- “Arts CARES Students Volunteer at Nature Saskatchewan” (Spring 2014) in Nature Saskatchewan’s *Nature Views*.

- “Explore Saskatchewan: Land of the Living Skies...and Prairies!” in *The Advance* Special Saskatchewan Tourism Edition (south-west Saskatchewan; circulation ~4500).
- “Celebrating Stewardship in Saskatchewan: Conservation Awareness Dinner in Elbow, SK” (Spring 2015) in Nature Saskatchewan’s *Nature Views*.
- “Stewards of SK Update” in the Prairie Conservation Action Plan eNewsletter, Volume 7, Issue 2, February 2, 2015 (circulation 654).
- “Conservation Awareness Day educates people young and old” – published in *The Advance* on March 3, 2015 (circulation 4,500/weekly).

### 4.3 Promotion Through Events

#### 4.3.1 Events and Workshops Attended

The Rare Plant Rescue (RPR) program attends various events to raise awareness among agricultural producers as well as both rural and urban residents. These venues provide an important opportunity to showcase and talk about the program and its goals. Conservation Awareness Day events are delivered by our Stewards of Saskatchewan programs, usually together with other conservation agencies (Section 0).



Figure 20. Nature Saskatchewan display featuring the Stewards of Saskatchewan centre panel (A. Kotylak).

In 2014-2015, RPR and SOS attended 15 events, conferences and workshops throughout southern Saskatchewan, often with our Nature Saskatchewan and Stewards of Saskatchewan floor displays, and educational materials (Table 13). Three of these events were Conservation Awareness Day events co-delivered with other conservation agencies. SOS staff were present at all of the events to answer questions and discuss the RPR, OBO, SFS, POS, and SOS programs with landowners, town residents, and other attendees. Other NS staff handled the display at the Nature Saskatchewan Spring Meet. Educational materials made available to interested persons included those from the SOS programs, other NS materials and some relevant materials from other agencies.

**Table 13. Events and workshops attended throughout Saskatchewan in 2014-2015.**

<b>Date</b>	<b>Event</b>	<b>Location</b>	<b>Audience and Approximate Attendance</b>
May 1 & 2, 2014	Taking Action for Prairie	Regina	~100 grade 7 & 8 students
May 24, 2014	Funville at Cathedral Village Arts Festival	Regina	~200 children and adults
June 20, 2014	Nature SK Spring Meet	Fort Qu'Appelle	~75 adults
July 17, 2014	Conservation Awareness Day	Eastend	40 landowners/producers, and a few children
September 20, 2014	Nature Saskatchewan Fall Meet	Regina/Lumsden	60 naturalists
October 22, 2014	University of Regina Career Fair	Regina	~100 post-secondary students and recent graduates
October 25, 2014	Gone Wild for Wildlife	Saskatoon	~150 children/adults (talked with ~46)
October 29, 2014	Conseil de la Cooperation de Saskatchewan (CCS) Career Fair	Regina	~30 post-secondary students, recent graduates
November 5, 2014	Campion College Non-Gift-Giving event	Regina	~100 students
November 24 & 26, 2014	Canadian Western Agribition	Regina	317 children and adults
December 4, 2014	Conservation Awareness Day	Elbow	18 landowners/producers
January 28 & 29, 2015	Native Prairie Restoration and Reclamation Workshop	Saskatoon	240 attendees (generally professionals)
February 2, 2015	University of Regina Spring Career Fair	Regina	spoke with ~150 students and recent graduates
February 6 & 7, 2015	Native Plant Society of SK Conference/AGM	Saskatoon	~50 professionals and naturalists
February 26, 2015	Conservation Awareness Day	Val Marie	40 landowners/producers, and a few children

The Nature Saskatchewan/Stewards of Saskatchewan display was developed in the spring of 2006 and replaced the Rare Plant Rescue table top display used in previous years. This new floor display consists of three retractable two-meter tall panel screens that can be used together or individually (Figure 20). The Stewards of Saskatchewan programs are featured on one of the panels, which includes three of the program names and a large colourful picture of these programs' target species; educational materials and staff (when available) enhance and complete the display. The display does not include the Plovers on Shore program or the banner Stewards of Saskatchewan program for all species at risk, as the display was developed before these programs were initiated.

**Recommendation:**

- Continue to attend relevant events and workshops as these provide valuable opportunities to gain knowledge, meet new contacts, and to raise awareness about the SOS programs and species at risk, while speaking with landowners as well as the urban public.

**4.3.2 Stewards of Saskatchewan Presentations**

Nature Saskatchewan regularly receives requests to provide a presentation on one or more of its landowner stewardship programs or natural history topics. In 2014-15, 7 presentations were delivered to urban and rural residents by Nature Saskatchewan staff on the Stewards of Saskatchewan programs or related topics, including information on what people can do to benefit species at risk (Table 14).

**Table 14. Presentations delivered by Stewards of Saskatchewan Staff in 2014-2015.**

<b>Date</b>	<b>Presentation Topic(s)</b>	<b>Presentation Length</b>	<b>Venue</b>	<b>Attendance</b>
July 17, 2014	Nature Saskatchewan and Stewards of Saskatchewan	15 minutes	Conservation Awareness Day (Eastend)	40 landowners/ producers
July 29, 2014	"Pitch for Pipits and Plovers" game show	45 minutes	Science Centre Day Camp	16 children, 4 adults
September 11, 2014	Guided hike along nature trail, presentation on plants, species at risk and Stewards of Saskatchewan	2 hours	Wolseley Nature Trail	15 grade six students, 8 adults
December 4, 2014	Nature Saskatchewan and Stewards of Saskatchewan	15 minutes	Conservation Awareness Day (Elbow)	18 adults

February 2, 2015	Nature Saskatchewan and Stewards of Saskatchewan	60 minutes	University of Regina Conservation Biology Class	~30 undergraduate students, 1 professor
February 26, 2015	Nature Saskatchewan and Stewards of Saskatchewan	15 minutes	Conservation Awareness Day (Val Marie)	40 adults and children
February 27, 2015	"Pitch for Pipits and Plovers" game show	45 minutes	Rouleau Public Library	4 children, 3 adults

#### 4.4 Promotion Through Educational Materials

Educational outreach materials including informational brochures, booklets, magnets, and posters are a cost-effective form of initial contact with landowners to spark an interest in species at risk and their conservation. The five Stewards of Saskatchewan programs use many forms of paper communication to increase awareness about plant species at risk, the Burrowing Owl, Loggerhead Shrike, Piping Plover, Sprague's Pipit, other prairie species, and our voluntary stewardship programs. Brochures, booklets and magnets provide valuable information and are distributed to rural as well as urban residents through Conservation Toolboxes (Section 2.3.2) during on-site visits with landowners; to landowners who call our toll-free HOOT Line to report plant species at risk, owl or shrike sightings; and at workshops and other events.

##### 4.4.1 Stewards of Saskatchewan Calendar

The Stewards of Saskatchewan (SOS) initiated an annual species-at-risk calendar in 2009 as a practical way to increase awareness about species at risk in Saskatchewan among our SOS participants. The 12-month, full-color calendar showcases a different species at risk each month for the purpose of increasing knowledge about the species. Each month includes a large colour picture of the featured species to aid in identification, two additional close-up photos of distinguishing characteristics for the plant species, a description of the species including its status, biology, habitat, source of food or flowering details (for plants), threats and interesting pieces of information. Maps of the species' distribution in Saskatchewan are also included in the back of the calendar. The selected species include those commonly and less commonly known, are easily identifiable, and their known and potential distributions range over a large portion of the province.

The 2015 species-at-risk calendar was not produced due to funding shortfalls. SOS plans to resume production in future years when possible.

##### 4.4.2 Brochures

The Rare Plant Rescue brochure serves to give interested people an overview of the program and was included in the RPR Conservation Toolbox (Section 2.3.2). An RPR brochure was first printed in the spring of 2008 and featured information about the Rare Plant Rescue program and benefits to landowners. The brochure was revised in 2009 and again in 2011. We revised the brochure again in March 2014. The current brochure features a full colour photo of a sandy blow out (a common

habitat type for some of Saskatchewan's rarest plants) as the background on both sides of the brochure, a map of southern Saskatchewan highlighting Rural Municipalities of interest to the Rare Plant Rescue program, and information for landowners about the program and about the importance of rare plant conservation (Appendix 3). Approximately 247 RPR brochures were distributed in 2014-2015 in Conservation Toolboxes (Section 2.3.2) and at workshops and other events (Section 0; 0).

#### 4.4.3 Fact Sheets and Posters

##### Fact Sheets

- **Leaving a Legacy: Conservation Easements** – The SOS staff promote conservation easements as a means of species at risk habitat protection to many rural landowners. One way that SOS does this is through the distribution of Nature Saskatchewan's conservation easement information sheet (Appendix 3). This one page, double-sided information sheet very briefly summarizes the state of Saskatchewan's native landscapes, describes what a conservation easement is, the benefits of granting a conservation easement, who qualifies for an easement, and what kinds of properties are of interest to the Nature Conservancy Canada (the main conservation easement holder to which SOS refers landowners). The *Leaving a Legacy: Conservation Easements* sheet was distributed to landowners visited by SOS staff (in the Conservation Toolbox), and to other interested individuals that SOS spoke with over the phone (landowners who we contacted or who were referred to us). Landowners expressing interest in conservation easements are further provided with NCC's *Conservation Easements: A Landowner's Guide* (as requested by NCC) which provides further details (e.g., on evaluation, limitations and restrictions, benefits, monetary and legal implications, etc.) and contact information.
- **Common Conservation Myths Answered** – The *Common Conservation Myths Answered* fact sheet (Appendix 3) was developed in 2008. Through working with many rural landowners over the years, staff have seen a pattern in myths that arise about conservation and conservation organizations. The one page, double-sided fact sheet describes the six most common conservation myths, and dispels them with facts. This fact sheet is well laid out, easy to read, and helpful when talking with a landowner who expresses some of these myths. The fact sheet was distributed in Conservation Toolboxes, at workshops and other events, and to other landowners who were spoken with over the phone. A Conservation Myth presentation, based on the fact sheet, is often presented with other Stewards of Saskatchewan program presentations.

##### Educational Posters

No RPR posters were created or presented in 2014-15. If time and funding permits, RPR posters could be developed and created in future years. The poster abstract from the RPR poster that was presented at the Prairie Conservation and Endangered Species Conference in Red Deer, AB, in February 2013 was published in the conference proceedings.

#### 4.4.4 Rare Plant Pocket Guide

In 2009, Rare Plant Rescue produced *A Pocket Guide to the Rare Plants of Southern Saskatchewan* (Figure 21), featuring 14 of RPR's target plant species and including information on distribution, habitat, identification, and threats. The purpose of this guide is to increase awareness about Saskatchewan's rarest plant species among rural residents and landowners. It does not provide comprehensive information about any single species, but instead lists characteristics needed to distinguish rare species from their more common look-alikes.

Completed and first printed in March 2010, a reprint of 255 copies was carried out in May 2011 due to a large demand for the booklets. In 2014-15, approximately 56 copies were distributed at various events (Section 0, 0) and in Conservation Toolboxes (Section 2.3.2). Feedback from landowners and professionals about the pocket guide continues to be very positive, and it has been described as an invaluable educational aid in identifying rare plants targeted by RPR.



Figure 21. Cover page of *A Pocket Guide to the Rare Plants of Southern Saskatchewan*.

#### 4.4.5 Stewards of Saskatchewan Coloring Book

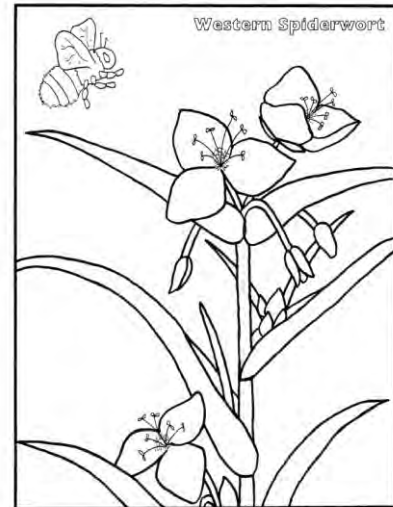
In 2012, the Stewards of Saskatchewan initiated the creation of a colouring book showcasing Saskatchewan species at risk (Figure 22). The coloring book is targeted at children aged five to ten, and is intended to increase awareness about Saskatchewan's species at risk among children in a fun and interactive way. It also provides a way for staff to engage children at events, presentations, and during landowner visits. An illustrator was hired on contract to create the drawings for the book. Each drawing features a species at risk in its natural habitat, and many include extra details such as insects or other Saskatchewan animals in the background (Figure 23). The 20 species featured in the book include:

- Tiny Cryptanthe (*Cryptantha minima*)
- Small-flowered Sand-verbena (*Tripterocalyx micranthus*)
- Slender Mouse-ear-cress (*Transberingia bursifolia* ssp. *virgata*)
- Small White Lady's-slipper (*Cypripedium candidum*)
- Buffalograss (*Bouteloua dactyloides*)
- Smooth Goosefoot (*Chenopodium subglabrum*)
- Hairy Prairie-clover (*Dalea villosa* var. *villosa*)
- Western Spiderwort (*Tradescantia occidentalis*) (Figure 23)
- Dwarf Woolly-heads (*Psilocarphus brevissimus*)
- Prickly Milk-vetch (*Astragalus kentrophyta* var. *kentrophyta*)



Figure 22. Cover page of *Nature's Colours: Saskatchewan's Species at Risk*.

- Plains Grape-fern (*Botrychium campestre*)
- Upland Evening Primrose (*Camissonia andina*)
- Bur Ragweed (*Ambrosia acanthicarpa*)
- Beaked Annual Skeletonweed (*Shinnersoseris rostrata*)
- Small Lupine (*Lupinus pusillus* ssp. *pusillus*)
- Burrowing Owl (*Athene cunicularia*)
- Loggerhead Shrike (*Lanius ludovicianus excubitorides*)
- Piping Plover (*Charadrius melodus circumcinctus*)
- Sprague’s Pipit (*Anthus spragueii*)
- Ferruginous Hawk (*Buteo regalis*)



**Figure 23. Sample page of a colouring book illustration.**

There were 1,500 copies of the book printed in March 2012. In 2014-15, we distributed 82 colouring books. The colouring books are very popular with children, and the NS office coordinator received numerous calls from individuals requesting colouring books.

**Recommendation:**

- If funding permits in 2015-16, print additional copies of the Stewards of Saskatchewan colouring book. The colouring book is a useful tool for increasing awareness about species at risk among children and youth who are not the target audience for other SOS education materials (e.g., brochures).

**4.5 School Programming**

**4.5.1 Elementary School Programming**

In 2014-2015 NS participated in delivering the Prairie Conservation Action Plan’s “Pitch for Pipits and Plovers” gameshow at Canadian Western Agribition on November 24-27, 2014 (Figure 24). This gameshow is an interactive learning tool where students learn about the endangered Piping Plover and the threatened Sprague’s Pipit, their respective critical habitats, the students’ role in helping to keep native and riparian areas healthy, and the important and positive role that ranchers and farmers can have in providing habitat for species at risk. NS delivered this programming to 28 elementary school classes, reaching 662 students and 144 chaperones.

In 2014, NS also helped deliver the Prairie Conservation Action Plan’s “Taking Action for Prairie” program for grades 7 and 8 students. Taking Action for Prairie is a new curriculum-supported, action-oriented, environmental education pilot program that reflects on the goals and priority areas of the Saskatchewan Conservation Action Plan. The grade 7 program features an activity in which the students assess the ecological footprint of the entire lifecycle of some common items (e.g., cell phones). The Grade 8 program features an activity in which the students are divided into small groups, and need to figure out the best way to manage a watershed, given that they each represent different stakeholders with different views and needs. In 2014-2015, Stewards of Saskatchewan staff helped PCAP’s Education Coordinator deliver these presentations to ~100 grade seven/eight students.





**Figure 24. Kristen Martin and Ashley Fortney deliver the Pitch for Pipits and Plovers game show at Agribition in 2014.**

## **4.6 Botanical Assessment Working Group**

In November 2011, the Saskatchewan Conservation Data Centre (SKCDC) initiated the Botanical Assessment Working Group (BAWG) to reassess the sub-national rankings (S-rankings or S-ranks) of a number of plant species in Saskatchewan, and Rare Plant Rescue was invited to participate in this working group. The S-ranks reflect a species' risk of extirpation in a particular sub-national region (in this case, Saskatchewan) and many are outdated, therefore, there has been a need to update many species' rankings for some time.

### **4.6.1 Reassessing species with an existing S-Ranking**

BAWG uses a standardized rank calculator to reassess the S-ranking of a species based on its rarity, trends, and threats (Faber-Langendoen et al. 2009, Master et al. 2009). Rarity and trends categories are assessed based on the database records (including Element Occurrences and Source Features) currently housed by the SKCDC for each species. BAWG members participate primarily by assessing the threats to each species, as well as helping to clarify some of the taxonomic issues that arise with different species and subspecies. Information on each species is sent out via email, and each BAWG member individually assesses the threats for any of those species with which they are familiar (not all participants will contribute to the reassessment of any given species). The individual assessments are then compiled by the coordinator into the Rank Calculator and a new S-rank is generated. The newly generated ranks are then reviewed by the BAWG members. If, through this process, any issues arise, or there is any contention about the new calculated S-rank of a species, the group then discusses these issues at one of two meetings each year.

#### **4.6.2 Assessing Species Not Ranked (SNR) species**

In 2014, members also assessed plant species that have not previously been assigned an S-ranking. These species are currently considered to have a ranking of Species Not Ranked (SNR). The standardized calculator used by BAWG is designed to re-assess species that are currently ranked and tracked by the SKCDC. The calculator requires information pertaining to range extent, area of occupancy, number of occurrences, population size and the viability/integrity of a species to be known. This information is not available for SNR species, therefore, the minimum requirements for ranking using the calculator are not met and, the Rank Calculator cannot be used for SNR species.

Although SNR species have not received an S-Ranking, Saskatchewan's botanists have described the population status of many of these plant species in past publications. In particular, the works of Dr. Vernon Harms are utilized in order to facilitate ranking of SNR species (Harms 2003, Harms 2006). The BAWG Coordinator correlates Dr. Harms' population status descriptions with S-Ranks (e.g., a species listed as Endangered in Harms has an S-Rank of S1). BAWG members submit a recommended ranking based on Harms' ranking and their own experiences, and provide comments to support their suggestion. The individual suggestions are compiled by the coordinator and a rank is assigned.

As with ranked species, not all participants will contribute to the assessment of any unranked species. Like reassessing species with an existing S-ranking, the newly assigned ranks are then reviewed by the BAWG members. If there is any disagreement over the newly assigned ranks, the group then discusses these issues at one of two meetings each year. Where necessary, BAWG consults specialists with regards to specific plant groups (e.g., the Lichens, the Sedges).

#### **4.6.3 Update on BAWG Activity in 2014-2015**

Between April 2014 and March 2015, BAWG considered 49 species for reassessment. The majority of species assessed in 2014-15 were SNR species. The Rare Plant Rescue coordinator participated in the reassessment of 7 species, and attended the in-person BAWG meeting on October 30, 2014 in Saskatoon, SK. Two RPR target species, Small Lupine and Prickly Milk-vetch, were assessed in 2014-15. Small Lupine's rank did not change (S3), but Prickly Milk-vetch's rank changed from an S1 to an S2 (Table 15).

**Table 15. Plant species reassessed by the Botanical Assessment Working Group in 2014-15.**

Approximate Date Assessed	Species Latin Name	Species Common Name	Old S-Rank	New S-Rank	RPR Contributed to Reassessment?
May 13, 2014	<i>Sisyrinchium mucronatum</i>	Mucronate Blue-eyed-grass	SNR	S3S4	No
October 14, 2014	<i>Chenopodium atrovirens</i>	Dark-green Goosefoot	SNR	SH	No
October 30, 2014	<i>Carex pauciflora</i>	Few-flowered Sedge	S2	S4	Yes
October 30, 2014	<i>Lupinus pusillus</i> ssp. <i>pusillus</i>	Small Lupine	S3	S3	Yes
October 30, 2014	<i>Scheuchzeria palustris</i> var. <i>americana</i>	American Scheuchzeria	S3	S4	Yes
October 30, 2014	<i>Astragalus kentrophyta</i> var. <i>kentrophyta</i>	Spiny Milk-vetch	S1	S2	Yes
November 20, 2014	<i>Viola palustris</i> var. <i>brevipes</i>	Alpine Marsh-violet	SNR	S4	No
November 20, 2014	<i>Verbena bracteata</i>	Bracted Vervain	SNR	S4	No
November 20, 2014	<i>Symphyotrichum falcatum</i> var. <i>falcatum</i>	White Prairie Aster	SNR	S4	No
November 20, 2014	<i>Symphyotrichum falcatum</i> var. <i>commutatum</i>	Creeping White Prairie Aster	SNR	S4S5	No
November 20, 2014	<i>Stellaria borealis</i> ssp. <i>borealis</i>	Northern Stitchwort	SNR	S4S5	No
November 20, 2014	<i>Solidago lepida</i> var. <i>lepida</i>	Western Canada Goldenrod	SNR	S4S5	No
November 20, 2014	<i>Bacopa rotundifolia</i>	Disc Water Hyssop	SNR	S1	No
November 20, 2014	<i>Carex lapponica</i>	Lapland Sedge	SNR	S1	No
November 20, 2014	<i>Chenopodium rubrum</i> var. <i>humile</i>	Red Goosefoot	SNR	S4	No
November 20, 2014	<i>Chenopodium rubrum</i> var. <i>rubrum</i>	Red Goosefoot	SNR	S4S5	No
November 20, 2014	<i>Cicuta maculata</i> var. <i>maculata</i>	Spotted Water-hemlock	SNR	S4	No
November 20, 2014	<i>Cuscuta indecora</i>	Pretty Dodder	SNR	S1	No
November 20, 2014	<i>Danthonia parryi</i>	Parry's Oat-grass	SNR	SH	No

November 20, 2014	<i>Eleocharis mamillata</i>	Soft-stem Spike-rush	SNR	S4	No
November 20, 2014	<i>Equisetum variegatum</i> <i>ssp. variegatum</i>	Variiegated Scouring-rush	SNR	S4	No
November 20, 2014	<i>Erigeron strigosus</i> var. <i>septentrionalis</i>	Prairie Fleabane	SNR	S3	No
November 20, 2014	<i>Erysimum asperum</i>	Western Wallflower	SNR	S5	No
November 20, 2014	<i>Juniperus communis</i> var. <i>depressa</i>	Common Juniper	SNR	S4S5	No
November 20, 2014	<i>Lemna turionifera</i>	Turion Duckweed	SNR	S5?	No
November 20, 2014	<i>Lepidium</i> <i>ramosissimum</i> var. <i>ramosissimum</i>	Branched Pepper-grass	SNR	S4S5	No
November 20, 2014	<i>Monarda fistulosa</i> var. <i>menthifolia</i>	Wild Bergamot	SNR	S4S5	No
November 20, 2014	<i>Oenothera villosa</i> ssp. <i>strigosa</i>	Hairy Evening- primrose	SNR	S4S5	No
November 20, 2014	<i>Oenothera villosa</i> ssp. <i>villosa</i>	Hairy Evening- primrose	SNR	S4	No
November 20, 2014	<i>Oxytropis campestris</i> var. <i>spicata</i>	Northern Yellow Point- vetch	SNR	S4S5	No
November 20, 2014	<i>Platanthera aquilonis</i>	Northern Green Orchid	SNR	S4S5	No
November 20, 2014	<i>Polygonum aviculare</i> ssp. <i>buxiforme</i>	Common Knotweed	SNR	S4S5	No
November 20, 2014	<i>Polypodium sibiricum</i>	Siberian Polypody	SNR	S4S5	No
November 20, 2014	<i>Potamogeton natans</i>	Floatingleaf Pondweed	SNR	S4	No
November 20, 2014	<i>Potamogeton nodosus</i>	Longleaf Pondweed	SNR	S4	No
November 20, 2014	<i>Potamogeton</i> <i>zosteriformis</i>	Flatstem Pondweed	SNR	S4S5	No
November 20, 2014	<i>Potentilla pensylvanica</i> var. <i>pensylvanica</i>	Pennsylvania Cinquefoil	SNR	S4S5	No
November 20, 2014	<i>Ranunculus flammula</i> var. <i>ovalis</i>	Creeping Spearwort	SNR	S4	No
November 20, 2014	<i>Ranunculus flammula</i> var. <i>reptans</i>	Creeping Buttercup	SNR	S4	No

November 20, 2014	<i>Rosa arkansana</i>	Low Prairie Rose	SNR	S4	No
November 20, 2014	<i>Salvia reflexa</i>	Lance-leaved Sage	SNR	SNA	No
November 20, 2014	<i>Saxifraga tricuspidata</i>	Three-toothed Saxifrage	SNR	S4S5	No
November 20, 2014	<i>Scrophularia lanceolata</i>	Lance-leaf Figwort	SNR	S1	No
November 20, 2014	<i>Selaginella densa</i> var. <i>densa</i>	Dense Spike-moss	SNR	S5	No
November 20, 2014	<i>Solanum physalifolium</i>	Ground-cherry Nightshade	SNR	SNA	No
November 20, 2014	<i>Solanum ptychanthum</i>	Black Nightshade	SNR	S4	No
January 16, 2015	<i>Amelanchier humilis</i>	Running Serviceberry	SNR	S2	Yes
January 16, 2015	<i>Astragalus lotiflorus</i>	Low Milk-vetch	S3	S4	Yes
March 6, 2015	<i>Antennaria howellii</i> ssp. <i>neodioica</i>	Tomentose Pussytoes	S2	S1	Yes

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## **6 RARE PLANT RESCUE FINANCIAL STATEMENT FOR 2014-2015**

See back cover attachment.

## **Appendix 1**

### **DESCRIPTIONS OF RARE PLANT SPECIES**



**BUFFALOGRASS** (*Bouteloua dactyloides* [Nutt.] J.T. Columbus)

**Description:** Buffalograss is a greyish-green, stoloniferous, curly-leaved grass that forms dense matted sods. Plants occur in circular colonial patches. Male and female plants are strongly dimorphic (physically different). Male plants have slender erect stems 6-12 cm high, bearing 1-3 short spikes, consisting of two-flowered spikelets. Female plants have very short, often prostrate stems beneath the leaves, bearing tight clusters of one-flowered spikelets that form hard globular burs containing 1-5 seeds. This dioecious (separate male and female plants) and perennial species reproduces sexually by seeds, and vegetatively by means of superficial stolons. It flowers in summer, setting seed soon thereafter. The toothed burs are more effectively dispersed by ungulates and water than by wind. Half the seeds germinate the first year, the remaining ones require one or more years of dormancy.

**Look-alikes/commonly confused with:**

False buffalograss (*Munroa squarrosa*)

Blue grama grass (*Bouteloua gracilis*)

**SMOOTH GOOSEFOOT** (*Chenopodium subglabrum* [S. Wats.] A. Nels.)

**Description:** Smooth Goosefoot is an annual that may grow up to 80 cm tall. It has many ascending branches. Dense clusters of small green flowers are widely spaced and open from July to September. Alternate leaves are pale green with a single vein; leaves measure 1-5 cm long and 1-5 mm wide. Very little is known in regards to the general biology of Smooth Goosefoot. The small flowers are reddish or greenish and occur in small spikes. The fruit contains only one seed, which is shining black and measures 1.3 to 1.6 mm in length and 1.2 to 1.4 mm in width. Smooth Goosefoot can be distinguished from other goosefoots as it lacks the "mealy" appearance typical of most goosefoots.

**Look-alikes/commonly confused with:**

Narrow-leaved goosefoot (*Chenopodium leptophyllum*)

**TINY CRYPTANTHE** (*Cryptantha minima* Rydb.)

**Description:** Tiny Cryptanthe is a member of the Borage family. It is an annual species with a bush-like appearance with bristly-haired stems branching near the base of the plant and may grow to 10-20 cm high. The spatula-shaped leaves, also covered by bristly hairs, can be up to 6 cm by 0.5 cm but get progressively smaller toward the tips of the stems (Environment Canada 2006a). Plants turn greyish in September and disintegrate making it extremely difficult to identify in the winter months. Tube-shaped flowers bloom from late May to early July (Smith 1998b). Many tiny, white-petaled flowers occur on scorpioid inflorescences. Every flower has a leaf-like bract occurring beneath it. A calyx of bristly green sepals with thickened whitish midribs surrounds the corolla. Within the flower, four small nutlets develop and mature in late July and August. One nutlet is large and smooth while the other three are smaller and rough. The calices turn brown with the maturity of the fruit (Environment Canada 2006a). It can be distinguished from other *Cryptantha* species by a combination of the following characteristics: white bristly hairs occurring on the leaves and stems and small (2 mm wide), white flowers on a scorpioid inflorescence, with leaf-like bracts occurring beneath each flower.

**Look-alikes/commonly confused with:**

Clustered Oreocarya (*Cryptantha celosoides*)

Kelsey's Cryptanthe (*Cryptantha kelseyana*)

Fendler's Cryptanthe (*Cryptantha fendleri*)

**SMALL WHITE LADY'S-SLIPPER** (*Cypripedium candidum* Muhl. ex Willd.)

**Description:** The Small White Lady's-slipper is a member of the Orchid Family. Stems grow to about 30 cm high and often occur in bunches of 3 to 60 stems off of a rhizome. A single flower with a white pouch-like lip with purple veins, a yellow staminode, and twisted greenish-yellow lateral petals occurs on each stem.

**Look-alikes/commonly confused with:**

Franklin's Lady's-slipper (*Cypripedium passerinum*)

**HAIRY PRAIRIE-CLOVER** (*Dalea villosa* [Nutt.] Spreng. var. *villosa*)

**Description:** Hairy Prairie-clover is in the Legume family and can be recognized by the purplish-pink flowers on long spikes up to 12 cm long, the densely hairy leaves (divided into 11-21 folded leaflets), the hairy pods and the decumbent growth form.

**Look-alikes/commonly confused with:**

Purple prairie-clover (*Dalea purpurea*)

**DWARF WOOLLYHEADS** (*Psilocarphus brevissimus* Nutt.)

**Description:** Dwarf Woollyheads is in the Aster family. It is a low-growing annual that is covered with woolly hairs and is relatively inconspicuous. Leaves are opposite in arrangement and are narrow, short (5-20 mm long and 1.5-5 mm wide), and widest at the base. Upper leaves usually surpass the flower heads. The flower heads are also woolly, not at all showy, and lobed. The achenes are flattened and oblanceolate.

**Look-alikes/commonly confused with:**

Cudweeds (*Gnaphalium* sp.)

**WESTERN SPIDERWORT** (*Tradescantia occidentalis* [Britt.] Smyth)

**Description:** Western Spiderwort belongs to the Spiderwort family, and has bright bluish-purple (sometimes rose or white), three-petaled flowers in clusters of up to 25 per stem (10-50 cm tall) with grass-like, folded leaves.

**Look-alikes/commonly confused with:**

Goat's beard (*Tragopogon dubuis*)

Monocot forbs like Camas (*Zigadenus* sp.) or Onion (*Allium* sp.)

**SLENDER MOUSE-EAR-CRESS** (*Transberingia bursifolia* [DC.] Al-Shehbaz & O'Kane)

**Description:** Slender Mouse-ear-cress, a member of the Mustard family, has white flowers, grayish hairy stems and toothed leaves, and cylindrical pods that form an elbow with the stem stalk before turning vertical (Saskatchewan Environment 2001). The plants are biennial and have a habit of disappearing for a few years before reappearing.

**Look-alikes/commonly confused with:**

Rock cress (*Arabis* sp.)

Rocket (*Erysimum* sp.)

Flixweed (*Descurainia sophia*)

**SMALL-FLOWERED SAND-VERBENA** (*Tripterocalyx micranthus* [Torr.] Hook.)

**Description:** Small-flowered Sand-verbena belongs to the Four-O'clock family, and is characterized by its decumbent growth form, with succulent stems and opposite leaves, covered with sticky hairs (Saskatchewan Environment 2001). Tiny green-white, funnel-shaped flowers grow in clusters in leaf axils and turn into peach-coloured three-winged seeds.

**Look-alikes/commonly confused with:**

Sand dock (*Rumex venosus*)

**PRICKLY MILK-VETCH** (*Astragalus kentrophyta* A. Gray var. *kentrophyta*)

**Description:** Prickly Milk-vetch is a perennial species that flowers from June to July. The flowers occur in clusters of 1-4 and are whitish or yellowish-white with a purplish tinge. Plants contain whitish stems with dense straight hairs and 3-7 odd-pinnate leaves, which later become rigid and prickly. It reaches 20 cm in height.

**Look-alikes/commonly confused with:**

None

**BUR RAGWEED** (*Ambrosia acanthicarpa* Hooker)

**Description:** Bur Ragweed is an annual, which flowers from early August to late September. It reaches 15-100 cm in height and contains both male and female flowers on the same plant. Its alternate leaves are deeply divided with long or stiff white hairs on both sides. Fused bracts form its hard burs.

**Look-alikes/commonly confused with:**

Common ragweed (*Ambrosia artemisiifolia*)

Western ragweed (*Ambrosia psilostachya*)

**POWELL'S SALTBUUSH** (*Atriplex powellii* S. Wats.)

**Description:** Powell's Saltbush is an annual and flowers from July to August. Plants grow up to 50 cm tall and contain both male and female flowers. The alternate leaves are strongly 3-veined, and ovate to broadly triangular. The entire plant (including leaves) is covered with scales, giving it a silvery-white appearance.

**Look-alikes/commonly confused with:**

Wedgescale saltbrush (*Atriplex truncata*)

Silver saltbrush (*Atriplex argentea*)

**PLAINS GRAPE-FERN** (*Botrychium campestre* W.H. Wagner and Farrar)

**Description:** The morphology of Prairie Dunewort can vary considerably. Plants are single stemmed and range from 2-12 cm tall. Clusters of spherical bodies called gemmae occur at the base of the fleshy roots and have an asexual reproductive role. The sporophore (fertile frond) often appears stubby and usually is 1 to 1.5 times longer than the trophophore (sterile frond) and is fleshy, once-pinnate and somewhat flattened. The trophophore appears sessile to short stalked, whitish green, fleshy, and slightly glaucous. The blade can measure up to 4 cm long and be oblong to linear oblong in outline and is mostly once pinnate, often somewhat asymmetrical and longitudinally folded. There are usually less than six pinnae (leaflets) which are remote, linear to linear spatulate in

shape, have dentate to crenulate margins and are often notched or cleft. Spores are small and covered with low round protuberances.

Prairie Dunewort spends a portion of its lifecycle as a subterranean gametophyte (gamete-producing individual). The sporophytic plant is a perennial, which produces leaves in April and May and is usually gone by late June. Prairie Dunewort may be saprophytic (derives its nourishment from dead or decaying organic matter).

**Look-alikes/commonly confused with:**

Other *Botrychium* species

**UPLAND EVENING-PRIMROSE** (*Camissonia andina* [Nutt.] Raven)

**Description:** Upland Evening-primrose is an early summer flowering annual. It reaches 15 cm in height with slender stems that spread from near its base. Its alternate leaves are 1-3 cm long and linear to narrowly oblanceolate in shape. The minute flowers occur in a congested cluster, beginning yellow and drying greenish or reddish.

**Look-alikes/commonly confused with:**

None

**SMALL LUPINE** (*Lupinus pusillus* Pursh ssp. *pusillus*)

**Description:** Small Lupine is a member of the Legume family. It is an annual that blooms from June to July. Its flowers are densely crowded or scattered along the stem. Flowers can appear white/rose to pink/purple to pale blue/white in colour, with a purple-tipped keel. Its alternate leaves consist of 3-9 palmate leaflets, which are smooth above and pubescent below. Silky hairs cover the stems, which may grow as much as 25 cm in height.

**Look-alikes/commonly confused with:**

Perennial lupine (*Lupinus argenteus*)

Indian bread-root (*Pediomelum esculentum*)

**BEAKED ANNUAL SKELETONWEED** (*Shinnersoseris rostrata* [Gray] S. Tomb)

**Description:** Beaked Annual Skeletonweed is an annual that flowers from August to September. It commonly reaches 30-60 cm in height and appears bushier than Common Skeletonweed. Its purplish-pink flower heads usually contain 10 petal-like ray flowers, and its 3-veined leaves are 6 mm wide and up to 15 cm long. Its branch-like stems are stiff, pale green, and hairless, producing a white milky juice when broken.

**Look-alikes/commonly confused with:**

Common Skeletonweed (*Lygodesmia juncea*)

**REFERENCES**

Please see main report for references.

**Appendix 2**

**RARE PLANT RESCUE VOLUNTARY STEWARDSHIP AGREEMENT**







VOLUNTARY STEWARDSHIP AGREEMENT

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

Fax: \_\_\_\_\_

Land Location(s) (include others on back of page if there are more than 3)

Rare Plant Species Present

¼ \_\_\_\_\_ Sec \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_ W\_M RM\_\_\_\_\_

\_\_\_\_\_

¼ \_\_\_\_\_ Sec \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_ W\_M RM\_\_\_\_\_

\_\_\_\_\_

¼ \_\_\_\_\_ Sec \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_ W\_M RM\_\_\_\_\_

\_\_\_\_\_

Approximate size of area being conserved: \_\_\_\_\_ acres or \_\_\_\_\_ hectares

Rare Plant Rescue gate sign / certificate (circle one) requested?  Yes  No

Name to appear on sign/certificate: \_\_\_\_\_

**Conditions under this voluntary agreement:**

- 1) Landowner will not knowingly destroy (cultivate) the native parcel supporting rare plants or rare plant habitat.
- 2) Landowner is receptive to Nature Saskatchewan staff monitoring the rare plant populations annually, with reasonable notice and at a mutually agreed upon time, as conditions on the land permit.
- 3) Landowner permits Nature Saskatchewan to provide the Saskatchewan Conservation Data Centre with the location of rare plant species; no personal information is given.
- 4) Landowner permits Nature Saskatchewan to provide the land location of rare plant species to Environmental Canada and select funders when requested (e.g. the Government of Canada's Habitat Stewardship Program)  Yes  No
- 5) Nature Saskatchewan agrees to provide a gate sign or certificate recognizing the landowner as a participating steward in Rare Plant Rescue, if requested.
- 6) Nature Saskatchewan agrees to provide information on rare plant species the RPR program through an annual newsletter and other additional information.

**This agreement is non-binding and may be cancelled at any time by notifying:**

Nature Saskatchewan, Room 206 – 1860 Lorne Street, Regina, SK S4P 2L7

Ph: 1-800-667-4668 Email: [rpr@naturesask.ca](mailto:rpr@naturesask.ca)

\_\_\_\_\_  
Signature of Nature  
Saskatchewan Representative

\_\_\_\_\_  
Signature(s) of  
Landowner(s)/Land Manager(s)

\_\_\_\_\_  
Date

**Program Supporters**

Rare Plant Rescue is a landowner stewardship program funded through the Saskatchewan Ministry of Environment's Fish & Wildlife Development Fund, the Government of Canada's Canada Summer Jobs Program, Environment Canada's Science Horizons Youth Internship Program, SaskPower, Elsa Wild Animal Appeal of Canada, Government of Saskatchewan Student Summer Works Program, TD Friends of the Environment, SaskTel, and the Prairie Conservation and Endangered Species Young Professional Stewardship Grant. Nature Saskatchewan is a partner in the Prairie Conservation Action Plan.



Rare Plant Rescue is a unique voluntary stewardship program for landowners having rare plant species or habitat for those species on their land. RPR aims to conserve rare plant habitat by building strong, respectful relationships with landowners and providing them with the information they need to make informed stewardship decisions. Rural landowners with habitat supporting, or having the potential to support, rare plants are informed of this unique natural heritage and are invited to join the Rare Plant Rescue program by signing this symbolic voluntary stewardship agreement. In doing so, they join 75 other land stewards who are currently participating in the RPR program, and add to the 101,000 acres (40,800 hectares) of valuable rare plant habitat already being conserved, all while continuing to use the land as they always have.

## Appendix 3

### 2014 RARE PLANT RESCUE CONSERVATION TOOLBOX CONTENTS<sup>1</sup>

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<sup>1</sup>*Not included: 2013/2014 SOS newsletter; Voluntary Habitat Stewardship Agreement; A Pocket Guide to the Rare Plants of Southern Saskatchewan; Canada's Species at Risk Program booklet produced by Environment Canada; At Home on the Range, Living with Saskatchewan's Prairie Species at Risk; and the business card of the Habitat Stewardship Coordinator.*



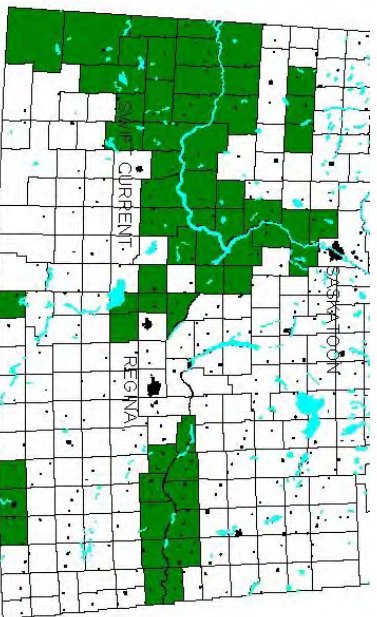
## The Importance of Prairie Landowners



Rural landowners play a key role in conserving our prairie habitat and maintaining healthy grasslands. Their good stewardship arises because of close ties to the land from which they derive their livelihood. We recognize that the health of the prairie ecosystem depends on the good stewardship shown by landowners across Saskatchewan.

If you are a southern Saskatchewan landowner or land manager with native prairie capable of supporting rare plant populations, you play an important role in their survival.

### Map of RPR Target "Hot Spot" R.M.s



### We Work Together To Help You!

**Education**—Increase your knowledge of prairie conservation options and species at risk through informative materials and workshops.

**Conservation Easements**—Leave a conservation legacy! Nature Saskatchewan, working together with the Nature Conservancy of Canada, offers you the opportunity to conserve the land you love!

## Thank you to our supporters!

- Government of Canada—Habitat Stewardship Program for Species at Risk
- Government of Saskatchewan—Fish and Wildlife Development Fund
- SaskPower
- Environment Canada—Science Horizons Youth Internship Program
- Government of Canada—Canada Summer Jobs
- Government of Saskatchewan—Student Summer Works Program
- Prairie Conservation and Endangered Species Conference—Young Professional Stewardship Grant
- Elsa Wild Animal Appeal of Canada
- TD Friends of the Environment Foundation
- SaskTel
- Nature Saskatchewan member donations

## And a special thank you to all the RPR landowners and volunteers!

To learn more about Rare Plant Rescue please contact:

### Nature Saskatchewan

Rm. 206 -1860 Lorne St.  
Regina, Saskatchewan S4P 2L7  
Toll-free (in SK & AB only): 1-800-667-4668  
Fax: (306) 780-9263  
Email: [rpr@naturesask.ca](mailto:rpr@naturesask.ca)  
Website: [www.naturesask.ca](http://www.naturesask.ca)



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# Rare Plant Rescue

*Habitat Conservation Through Landowner Stewardship*



For more information call toll-free  
1-800-667-4668

[www.naturesask.ca](http://www.naturesask.ca)

# Rare Plant Rescue

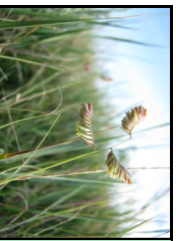
## Habitat Conservation Through Landowner Stewardship

Nature Saskatchewan's **Rare Plant Rescue** (RPR), launched in 2002, is a voluntary stewardship program that promotes the conservation of rare plant species and their prairie habitat.

We work with southern Saskatchewan landowners who voluntarily conserve native prairie - including active or semi-stabilized sand dunes and blow-outs, as well as native pastures - from destruction or cultivation. Our aim is to conserve rare plant habitat by building strong, respectful relationships with landowners and providing them with the information they need to make informed stewardship decisions.

### What Does Rare Plant Rescue Do?

- Conserves prairie habitat for plant species at risk and other wildlife through voluntary landowner stewardship.
- Increases awareness of, and educates the public about plant species at risk and other prairie species.
- Conducts searches for, and monitors populations of plant species at risk to increase the knowledge about them.
- Promotes beneficial management practices, habitat enhancement and restoration activities that benefit both producers and prairie species.



**Did you know?**  
Many rare plant species, such as Buffalograss, thrive with grazing.

### Why Conserve Rare Plants?

Prairie plants are a part of Saskatchewan's natural heritage and contribute to overall ecosystem health. Other species rely both on the plants themselves as well as a functioning ecosystem for survival. Conservation of rare plant species ensures a healthy and diverse ecosystem for the future.

Southern Saskatchewan's rarest plants face a number of threats including loss or degradation of habitat through cultivation, invasion of noxious weeds (e.g., leafy spurge, downy brome), stabilization of dune habitats, invasion of woody species (e.g., tree and shrub encroachment), oil and gas activities, and absence of natural processes (e.g., grazing and fire). Conservation activities help mitigate these threats.



**Did you know?**  
Sandy blow-outs and dunes provide valuable habitat for some of Saskatchewan's rarest plant species, such as Western Spiderwort.

### Target Rare Plant Species for RPR

- Beaked Annual Skeletonweed
  - Buffalograss
  - Bur Ragweed
  - Dwarf Woollyheads
  - Hairy Prairie-clover
  - Plains Grape-fern
  - Powell's Saltbush
  - Prickly Milk-vetch
  - Slender Mouse-ear-cress
  - Small-flowered Sand-verbena
  - Small Lupine
  - Small White Lady's-slipper
  - Smooth Goosefoot
  - Tiny Cryptanthus
  - Upland Evening Primrose
  - Western Spiderwort
- Photos of these species can be found on our website: [www.naturesask.ca](http://www.naturesask.ca)

### Get Involved!

Landowners and land managers can participate in RPR and conserve prairie habitat while continuing to use the land as they always have.

Benefits to participating landowners include:

- Recognition through a personalized gate sign (if requested).
- Annual newsletter, calendar and a tool-kit of relevant information and conservation options.
- Non-binding 'handshake' agreement.
- Personal invitation to our Conservation Awareness Days – local, free-of-charge workshops with a meal.

Helping maintain a healthy ecosystem with a diversity of species that benefit producers and future generations.

### Other ways to participate:

- Report sightings of rare plant species by calling our toll-free number: **1-800-667-4668** (SK & AB only).
- Volunteer with Nature Saskatchewan.
- Spread the word about Rare Plant Rescue and prairie conservation!



**The Rare Plant Rescue crew at work!**  
Each summer, Rare Plant Rescue staff search for new occurrences of rare plants, and monitor known occurrences of rare plants to evaluate plant health and identify any threats.

# What is Operation Burrowing Owl?

## The Importance of Prairie Landowners

Rural landowners play a key role in conserving our prairie habitat and maintaining healthy grasslands. Their good stewardship arises because of close ties to the land from which they derive their livelihood. We recognize that the health of the prairie ecosystem depends on the good stewardship shown by landowners across Saskatchewan!



## What does OBO do?

- Protects grassland habitat through landowner stewardship
- Promotes habitat enhancement and restoration
- Increases awareness and knowledge of Burrowing Owls and other prairie species at risk
- Monitors Burrowing Owl populations

## What are the benefits?

- **Recognition** through a personalized gate sign
- Annual newsletter and other educational **information**
- Non-binding 'handshake' agreement
- **Financial support** for habitat enhancement activities including seeding native pasture
- Helping to maintain a **healthy ecosystem** with a diversity of species for future generations

**For more information, please call  
Operation Burrowing Owl at  
1-800-667-HOOT (4668)**

## Thank You to our Supporters!

- Government of Canada—Habitat Stewardship Program
- Government of Saskatchewan—Fish and Wildlife Development Fund
- SaskPower
- Environment Canada—Science Horizons Youth Internship Program
- U.S. Fish and Wildlife Service—Neotropical Migratory Bird Conservation Act
- Government of Canada—Canada Summer Jobs Program
- Government of Saskatchewan—Student Summer Works Program
- ELSA Wild Animal Appeal of Canada
- TD Friends of the Environment Foundation
- SaskTel
- Nature Saskatchewan member donations

## And A Special Thank You To OBO Landowners and Volunteers

To learn more about **Operation Burrowing Owl** contact:

### Nature Saskatchewan

Rm. 206-1860 Lorne St.

Regina, Saskatchewan S4P 2L7

Toll Free (in SK & AB Only): 1-800-667-4668

Or (306) 780-9273 Fax: 306-780-9263

Email: [info@nature Sask.ca](mailto:info@nature Sask.ca)

Website: [www.naturesask.ca](http://www.naturesask.ca)



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March 2014

# Operation Burrowing Owl



Habitat Conservation Through  
Landowner Stewardship

To Report a Sighting  
Call the Hoot Line:  
1-800-667-HOOT (4668)



# Operation Burrowing Owl

## Grassland Conservation Through Landowner Stewardship

Nature Saskatchewan's **Operation Burrowing Owl** (OBO) was launched in 1987 to protect Burrowing Owl habitat from cultivation, monitor population changes, and increase awareness of the owl. Landowners voluntarily agree to conserve grassland habitat for Burrowing Owls and other prairie wildlife.

Over 370 private landowners participate in OBO, and together are conserving over 60,000 ha (150,000 acres) of grassland habitat in pastures and other lands while continuing regular land use practices. These landowners annually report the number of owls on their land.

If you are one of the few landowners with Burrowing Owls, or if you have prairie habitat that formerly supported owls, you have an important role in their survival. Every nest site is important to their recovery. Most OBO participants no longer have nesting owls, but their role in conserving habitat is essential if we are to see a population increase of these prairie ambassadors!

### What Do I Do if I Spot a Burrowing Owl?

Call the **Hoot Line: 1-800-667-HOOT (4668)**!

By reporting a sighting you are helping to monitor the owl's population. Be sure to also report leg bands, as this provides information about their movements.

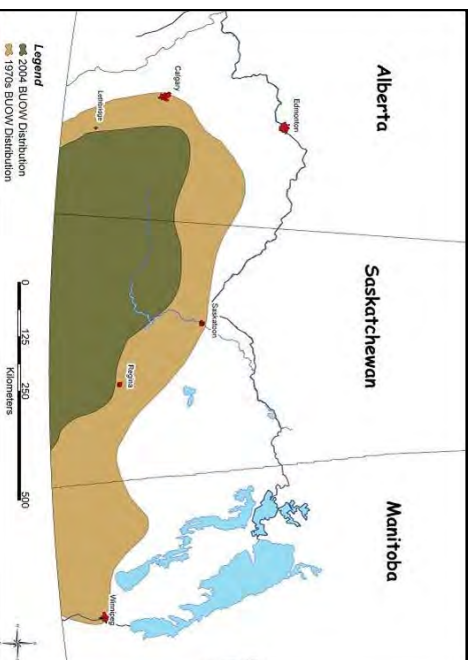
### If Burrowing Owls are nesting on your land, become an Operation Burrowing Owl steward!



**Did You Know?**  
The **American Badger** is a very important prairie species!  
Badgers **eat many rodent pests** such as ground squirrels and mice and serve as a **burrow provider** for the Burrowing Owl.

### Where are Burrowing Owls Found?

The Burrowing Owl, or ground owl, was once found across the open mixed grasslands and aspen parkland. It ranged from Winnipeg in the east, to Calgary in the west and Prince Albert in the north. It has now disappeared from Manitoba and parts of Saskatchewan and Alberta. Burrowing Owls are now primarily found in the mixed grassland regions of Alberta and Saskatchewan.



### Know Its Life History!

Burrowing Owls return to Saskatchewan from wintering areas in Texas and Mexico from mid April to mid May. They prefer to nest in grazed pastures, but on occasion will nest in cultivated land, hay fields, or roadside ditches if they find a good burrow.

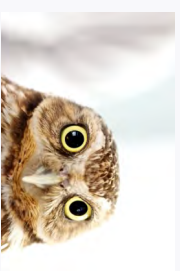
Only 24 cm (9 inches) tall, male Burrowing Owls are often seen standing on mounds of dirt next to their burrows or on nearby fence posts while the females are underground incubating the 6 to 12 eggs.

In late June, young owls begin to explore the area outside their burrows, and congregate around the burrow entrance waiting to be fed by the parents. Young owls often move to nearby burrows when the nest burrow becomes overcrowded.

By August, the young owls have learned to fly and hunt and may move as far as 3 km from the nest area. Migration to Texas and Mexico occurs in September and October.

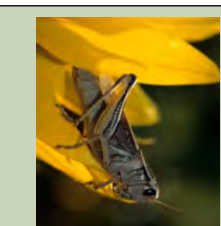
### How is the Burrowing Owl Faring?

The Burrowing Owl was once a common summer resident of the Canadian prairies. In Canada, it is estimated that population numbers have declined over the past three decades from 3000 pairs to fewer than 800 pairs and only occupy 36% of their historical grassland region.



The owl's decline has been attributed to changes in the prairie landscape. Over 75% of our native grassland has been cultivated, and 40% of our wetlands have been lost. Grassland that remains is often heavily fragmented. Habitat change has resulted in a lower survival rate for Burrowing Owl eggs and young.

### Did You Know?



Burrowing Owls are a **natural pest control!** They love to eat mice and grasshoppers. **One nest of Burrowing Owls can eat 1,000 or more rodents and many more insects in a single year!**

### Working Together to Help You!

**Education** - Increase your **knowledge** of prairie conservation and species at risk through educational materials including fact sheets, booklets, and workshops.

**Habitat Enhancement** - Expand your pasture! Nature Saskatchewan offers a **native pasture expansion** program to improve habitat for Burrowing Owls and other grassland species. It gives you more pasture and increases habitat for the owls - a **win-win situation** for you and wildlife!

**Conservation Easements** - Leave a conservation legacy! Nature Saskatchewan, working together with partner agencies, offers you this opportunity to **protect the land you love!**

**For more information or to participate in Operation Burrowing Owl, please call 1-800-667-HOOT (4668)**

## The Importance of Prairie Landowners

Rural landowners play a key role in conserving our prairie habitat and maintaining healthy grasslands. Their good stewardship arises because of close ties to the land from which they derive their livelihood. We recognize that the health of the prairie ecosystem depends on the good stewardship shown by landowners across Saskatchewan.

If you are a southern Saskatchewan landowner with Loggerhead Shrikes, you play an important role in their survival. Every nesting site is important to the shrike's population and to our enjoyment — keeping this beneficial and unique bird a part of our prairie heritage is important.

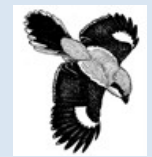
## We Work Together to Help You!

**Education** - Increase your knowledge of prairie conservation options through educational materials including Nature Saskatchewan's Agriculture & Biodiversity fact sheets for both farming and ranching.

**Conservation Easements** - Leave a conservation legacy through a legal agreement to conserve the land you love for future generations!

## Give a HOOOT about wildlife!

If you spot a Loggerhead Shrike, call our Toll-Free Line:



**1-800-667-4668 (HOOOT)**  
By reporting a sighting, you are helping to monitor the shrike population.

If you have nesting Loggerhead Shrikes, become a **Shrubs for Shrikes** steward!

## Thank You to our Supporters!

- Government of Canada—Habitat Stewardship Program
- Government of Saskatchewan—Fish and Wildlife Development Fund
- SaskPower
- Environment Canada—Science Horizons Youth Internship Program
- U.S. Fish and Wildlife Service—Neotropical Migratory Bird Conservation Act
- Government of Canada—Canada Summer Jobs
- Government of Saskatchewan—Student Summer Works Program
- ELSA Wild Animal Appeal of Canada
- TD Friends of the Environment Foundation
- SaskTel
- Nature Saskatchewan member donations

## And A Special Thank You To SFS Landowners and Volunteers

To learn more about **Shrubs for Shrikes** contact:

### Nature Saskatchewan

206-1860 Lorne St.

Regina, Saskatchewan S4P 2L7

Toll Free (in SK & AB Only): 1-800-667-4668

Or (306) 780-9273 Fax: 306-780-9263

Email: [info@nature Sask.ca](mailto:info@nature Sask.ca);

Website: [www.naturesask.ca](http://www.naturesask.ca)



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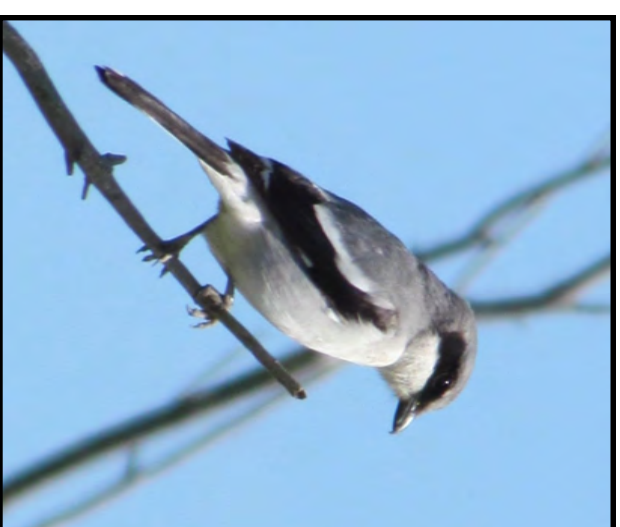


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# Shrubs for Shrikes



Habitat Conservation Through  
Landowner Stewardship

To Report a Sighting  
Call the Hoot Line:  
**1-800-667-HOOOT**



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March 2014

## Shrubs for Shrikes



Sketch by Paul Gheraghy. Courtesy Sask. Environment

### Habitat Conservation Through Landowner Stewardship

Nature Saskatchewan's Shrubs for Shrikes (SFS), launched in 2003, is a voluntary stewardship program that promotes the threatened Loggerhead Shrike as an ambassador for conserving prairie habitat for shrikes and other prairie species. SFS works with southern Saskatchewan landowners to voluntarily conserve prairie habitat including shrubs, active and abandoned homesteads, shelterbelts, and pastures from destruction and cultivation.

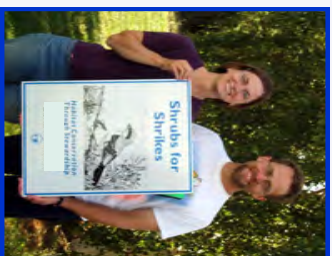
SFS is one program within the Stewards of Saskatchewan (SOS) suite of habitat stewardship programs delivered by Nature Saskatchewan. SFS along with Operation Burrowing Owl (OBO), Plovers on Shore (POS), and Rare Plant Rescue (RPR), work with rural landowners to raise awareness and conserve habitat for specific species. While our SOS banner program covers all other species at risk in Saskatchewan.

### What does Shrubs for Shrikes do?

- Conserves prairie habitat for Loggerhead Shrikes and other wildlife through voluntary landowner stewardship.
- Increases awareness and education of Loggerhead Shrikes and other prairie species.
- Encourages and monitors the shrike population in Saskatchewan through SFS participants.
- Promotes beneficial managements practices, habitat enhancement and restoration.

## Participate in Shrubs for Shrikes!

Private and public landowners participate in Shrubs for Shrikes, conserving prairie habitat, all while using their land as they always have.



## Benefits to participants include:

- **Recognition** through a personalized gate sign.
- Annual newsletter and a tool-kit of **educational information** and conservation options.
- Non-binding **'handshake' agreement**.
- Personal **invitation** to our Conservation Awareness Day events (local, free, lunch provided; day to share knowledge and experiences of biodiversity, wildlife, and management practices.
- Helping to maintain a **healthy ecosystem** with a diversity of species for future generations.



For more information or to participate in Shrubs for Shrikes, please call

1-800-667-4668.

## Loggerhead Shrike 'Bites':

- Loggerhead Shrikes are classified as a songbird, yet they hunt like a hawk.
- Having songbird feet, shrikes do not have the strong talons used by hawks to secure their prey when eating so they impale prey on barbed wire or thorns.
- There are ~7,000 pairs of shrikes in Saskatchewan, a low enough number to be considered a threatened species.
- Loggerhead Shrikes were found only in coulees prior to settlement in Saskatchewan.
- Loggerhead Shrikes will readily attack and carry up to 129% of their body mass and it is possible for them to carry heavier prey...but they can only lift it ~0.5 m off the ground and in short bursts of flight.
- Loggerhead Shrikes nest in native thorny shrubs such as hawthorn and buffaloberry and trees for protection from predators.
- At 2 weeks of age, young have grown from 3 grams (at hatch) to weighing 45 grams—almost as much as their parents.
- Shrikes provide natural pest control! At a nest with 8 nestlings, an adult brought a grasshopper to the nest every four minutes in an hour of timed observations.

## Did You Know?

Loggerhead Shrikes love to eat rodents, frogs and grasshoppers!

They often impale them on barbed wire or thorns to assist in eating their prey or to store for later.



## The Importance of Prairie Landowners

Rural landowners play a key role in conserving our prairie habitat and maintaining healthy ecosystems. Their good stewardship arises because of their close ties to the land from which they derive their livelihood. We recognize that the health of shorelines and wetlands depends on the good stewardship shown by landowners across Saskatchewan.

If you are a Saskatchewan landowner with Piping Plover habitat, you play an important role in its survival. Every available nesting site is important to the plover's population and to its survival.



Photo by David Krughoff

## We Work Together to Help You!

**Education:** Increase your knowledge of prairie conservation options and species at risk through educational materials and workshops.

**Conservation Easements:** Leave a conservation legacy through a legal agreement to conserve the land you love!

## Thank You to our Supporters!

- Government of Canada Habitat Stewardship Program for Species at Risk
- Saskatchewan Ministry of Environment — Fish and Wildlife Development Fund
- ECO Canada — National Environmental Youth Corp. Program
- The EILB Foundation
- SaskPower
- US Fish & Wildlife Service — Neotropical Migratory Bird Conservation Act Program
- TD Friends of the Environment Foundation
- SaskCulture
- Nature Saskatchewan member donations

### And A Special Thanks To:

### POS Landowners and Volunteers

To learn more about Plovers On Shore contact:

Nature Saskatchewan  
206-1860 Lorne St.  
Regina, Saskatchewan S4P 2L7  
Toll-Free: 1-800-667-4668 Fax: 306-780-9263  
E-mail: [outreach@nature Sask.ca](mailto:outreach@nature Sask.ca)  
Website: [www.naturesask.ca](http://www.naturesask.ca)



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# Plovers On Shore



Photo by David Krughoff

## A Shoreline Stewardship Program

To Report a Sighting  
Call Toll-Free:  
1-800-667-4668



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# Plovers On Shore

Plovers On Shore (POS) is a voluntary stewardship program, initiated in 2008, to support landowners that manage lands and habitat that are important to the survival of the endangered Piping Plover.

We work with landowners to raise awareness and to voluntarily protect Piping Plover habitat from destruction. Habitat conservation includes maintaining (not draining) wetlands, discouraging livestock use of shorelines and wetlands during the breeding season, and not cultivating surrounding prairie.

Private and public landowners who have past or current records of Piping Plovers using shorelines along wetlands on their land can participate in POS. Landowners voluntarily agree to conserve and avoid negatively altering this habitat while continuing land use practices beneficial to their operation.

POS is one of four programs within the Stewards of Saskatchewan (SOS) suite of habitat stewardship programs delivered by Nature Saskatchewan. The SOS programs — POS, Operation Burrowing Owl, Shrubs For Shrikes, and Rare Plant Rescue — work with rural landowners in Saskatchewan to raise awareness and conserve habitat for species at risk.

## What does Plovers On Shore do?

- Conserves shoreline and wetland habitat for Piping Plovers and other wildlife through voluntary landowner stewardship.
- Increases awareness and education about the Piping Plover and other prairie species.
- Monitors the plover's year-to-year use at sites through POS participants.
- Promotes beneficial management practices, and habitat protection and enhancement.



## Become a Plovers On Shore Steward!

Benefits to participating landowners include:

- Gaining recognition through receiving a personalized gate sign (if requested).
- Receiving an annual SOS newsletter and a tool-kit of educational information and conservation options.
- Receiving a personal invitation to our Conservation Awareness Day events (local, free-of-charge, lunch provided; day to share knowledge and experiences on biodiversity, species at risk, range management practices and beneficial management practices).
- Accessing funding opportunities to enhance habitat, e.g., install an alternate water source or fencing to keep livestock away from shorelines.
- Signing a non-binding 'handshake' agreement.
- Belonging to a community of like-minded producers with opportunities for networking, support, and information exchange.
- Helping to maintain a healthy ecosystem with a diversity of species for future generations.

For more information or to participate in Plovers On Shore, please call 1-800-667-4668

## Did You Know?

- In 1985, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the Piping Plover as endangered.
- Canada accounts for nearly 36% of the world's total Piping Plover population, and about 64% of the Canadian population breeds in Saskatchewan.
- An international census of plovers every 5 years since 1991 has shown Saskatchewan to support more Piping Plovers than any other jurisdiction.
- Piping Plovers have a restricted habitat, nesting and feeding on sandy and gravelly beaches or gravelly patches of shorelines of freshwater lakes and alkaline water basins.
- Within hours of hatching, the already feathered young leave the nest and begin to forage.
- To protect themselves from danger, plover chicks will crouch motionlessly in the sand and become very difficult to see due to their camouflage. An adult plover lures the predator away, often by pretending to be injured, and then fly's away to re-join the chicks.



## The Importance of Prairie Landowners

With less than 25% of our native grasslands remaining, rural landowners play a key role in conserving prairie habitat and maintaining healthy grasslands. Their good stewardship arises because of close ties to the land from which they derive their livelihood. We recognize that the health of the prairie ecosystem is a shared responsibility, enhanced by the good stewardship shown by landowners across Saskatchewan!

If there are any species at risk on your land we would like to congratulate you on a job already well done! Remember, if species at risk are on your land you should feel proud because that means that you are already doing something right! Those with species at risk on their land are invited to participate in Stewards of Saskatchewan.



## Working Together to Help You!

**Education-** Increase your knowledge of prairie conservation and species at risk through educational materials including fact sheets, booklets, and workshops.

**Habitat Enhancement-** Nature Saskatchewan offers projects, such as fencing or alternative water development, to improve habitat for species, such as Spragues Pipits. Improving your operation and increasing habitat for wildlife – a win-win situation!

**Conservation Easements-** Leave a conservation legacy! Nature Saskatchewan, working together with partner agencies, offers you this opportunity to protect the land you love!

## Thank You to our Supporters!

- Government of Canada—Habitat Stewardship Program
- Government of Saskatchewan—Fish and Wildlife Development Fund
- SaskPower
- Environment Canada—Science Horizons Youth Internship Program
- U.S. Fish and Wildlife Service—Neotropical Migratory Bird Conservation Act
- Government of Canada—Canada Summer Jobs
- Government of Saskatchewan—Student Summer Works Program
- ELSA Wild Animal Appeal of Canada
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- SaskTel
- Nature Saskatchewan member donations

And a Special Thank You to  
SOS Landowners and Volunteers

To learn more about Stewards of Saskatchewan contact:

**Nature Saskatchewan**  
206-1860 Lorne St.

Regina, Saskatchewan S4P 2L7

Toll Free (SK & AB Only): 1-800-667-4668

Or (306) 780-9273 Fax: 306-780-9263

Email: [info@nature Sask.ca](mailto:info@nature Sask.ca)

Website: [www.naturesask.ca](http://www.naturesask.ca)



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2014

# Stewards of Saskatchewan



Northern  
Leopard Frog



Monarch



Ferruginous  
Hawk



Barn Swallows



Sprague's Pipit

Habitat Conservation  
Through Stewardship

To Report a Sighting  
Call the Hoot Line  
1-800-667-HOOT (4668)

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SASKATCHEWAN

## Stewards of Saskatchewan

Nature Saskatchewan's Stewards of Saskatchewan (SOS) is a voluntary stewardship program that works with southern Saskatchewan landowners to conserve prairie habitat for all species at risk on the prairies. Until 2010, SOS was a suite of four voluntary stewardship programs: Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, and Rare Plant Rescue; but has recently expanded to include all prairie species at risk, regardless of whether or not they fall under our four target areas.



Common Nighthawk

## Some of the Species at Risk in Saskatchewan:

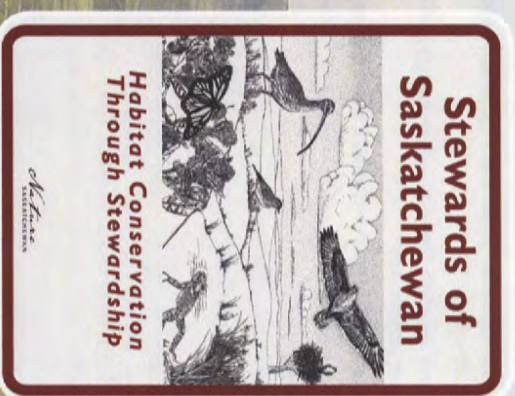
<b>Amphibians</b>	
Northern Leopard Frog	Eastern Yellow-bellied Racer
Great Plains Toad	Greater Short-horned Lizard
Tiger Salamander	
<b>Butterflies</b>	<b>Birds</b>
Monarch	Barn Swallow
Mormon Metalmark	Bobolink
<b>Mammals</b>	Common Nighthawk
Ord's Kangaroo Rat	Ferruginous Hawk
Swift Fox	Horned Grebe
American Badger	Peregrine Falcon
	Short-eared Owl
	Sprague's Pipit

## What does Stewards of Saskatchewan do?

- Conserves habitat for species at risk and other wildlife through voluntary landowner stewardship.
- Increases awareness and education about Saskatchewan species at risk and other prairie species.
- Encourages and monitors wildlife populations in Saskatchewan through SOS participants.
- Promotes beneficial management practices and habitat protection, enhancement, and restoration.
- This program ultimately benefits many prairie species and their habitat.

## Become a Saskatchewan Steward!

Private and public landowners participate in Stewards of Saskatchewan to conserve prairie habitat, all while using their land as they always have.



## Benefits to participating landowners include:

- Gaining **recognition** through receiving a free personalized gate sign.
- Receiving an annual SOS newsletter and a tool-kit of educational **information** and conservation options.
- Receiving a personal invitation to our **Conservation Awareness Day** events (local, free-of-charge lunch provided; day to share knowledge and experiences on biodiversity, species at risk, range management practices and beneficial management practices).
- Accessing **funding opportunities** to enhance habitat, e.g: converting cropland to pasture using native grasses; installing an alternate water source or fencing to keep livestock away from shorelines.
- Signing a non-binding 'handshake' agreement and receiving **graduated rewards** for continued participation.
- **Belonging** to a community of like-minded producers with opportunities for networking, support, and information exchange.
- Helping to maintain a **healthy ecosystem** with a diversity of species for future generations.

## Did You Know?

- **Northern Leopard Frogs** are the largest frogs in Saskatchewan, and come in many different shades of green and brown. (see below)
- **Monarch Butterflies** migrate thousands of miles, from Canada to Mexico and back, taking several generations to complete the trek!
- **Barn Swallows** build nests by collecting mud in their bills and spitting it out, creating a cup-shape.
- Most of the diet of **Ferruginous Hawks** consists of Richardson's ground squirrels! These hawks can be identified by their rust-coloured legs against their white undersides; which is why some people call them "rusty hawks".
- **Sprague's Pipits** are usually heard, but rarely seen; as the males defend their territory they can sing up to 100 m above ground for hours!
- **Common Nighthawks** often lure predators away by pretending that they have a broken wing, while their well-camouflaged chicks remain motionless, blending in with their surroundings.



Northern Leopard Frog

For more information on species at risk or to participate in Stewards of Saskatchewan, please call

1-800-667-HOOT (4668)

*Grassland birds show the most consistent, widespread, and steepest decline of any group of birds in North America.\**



## Decline

Approximately 20% of native grasslands remain on the Canadian prairies. Loss and degradation of native grasslands has greatly reduced the amount of suitable habitat for Sprague's Pipit.

Breeding Bird Survey data collected over the past 40 years show that populations are declining rapidly in many parts of its range, particularly during the last 15 years.

Native rangeland in good to excellent range condition is critical for the survival and recovery of Sprague's Pipit.

## Legal Status and Designations

The Committee on the Status of Endangered Wildlife in Canada has designated the Sprague's Pipit as **threatened**. This means it is likely to become endangered if nothing is done to reverse the factors leading to its decline. It is illegal to kill or disturb Sprague's Pipits or their nests.

### *A Special Thanks To:*

*Landowners and Land Managers who are conserving our prairie heritage.*

*\*North American Breeding Bird Survey*

## Causes and Solutions

Causes of unsuitable habitat for Sprague's Pipit: How you can help.

- 1) **Habitat loss and fragmentation:** Sprague's Pipit avoids habitat edges and small grassland patches. **Retain all native prairie.** Areas larger than 65 ha are most valuable for pipits. Avoid constructing built-up roads and plant roadsides with non-invasive vegetation.
- 2) **Inappropriate grazing:** too little grazing may result in vegetation that is too tall and dense, too much grazing may result in vegetation that is too short and sparse. **Grazing at stocking rates recommended for your soil zone.**
- 3) **Invasion of exotic species and woody vegetation:** reduces the amount of suitable habitat for pipits. **Reduce or remove woody and exotic species by burning, grazing, mowing or manual removal.** Convert cultivated land within 800 m of native prairie to non-invasive perennial cover; avoid planting tall flowering plants.
- 4) **Haying during the breeding season:** removes cover and can also destroy nests. **Delay harvesting hay until after the breeding season (July 21).**
- 5) **Pesticide use:** grasshoppers and other insects are important food items for adults and nestlings. **Avoid using pesticides in or adjacent to native prairie.**

To Report a Sighting call: 1-800-667-4668

The Stewards of Saskatchewan HOOT Line



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Nature Saskatchewan receives funding from:

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Government of Canada Habitat Stewardship Program for Species at Risk  
Saskatchewan Ministry of Environment - Fish & Wildlife Development Fund

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March 2010

# Sprague's Pipit

*Anthus spragueii*





# Sprague's Pipit: Goldilocks of the grassland birds?

Find out why this beautiful prairie songbird has acquired such an unusual nickname.

## Identification

Sprague's Pipit is a small (15-17 cm, 23-25 g) ground-nesting songbird. The colouring and markings allow the bird to blend in with its natural habitat. It has brown and white streaked plumage, and upon closer inspection has several features which help to identify it. The head is characterized by a thin bill and relatively large brown eyes; the breast is composed of a necklace of short streaks, while the belly and flanks are unmarked. The outer white tail feathers



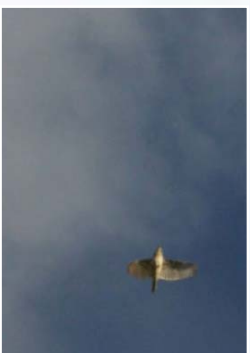
contrast markedly with the inner brown feathers and are most noticeable when the tail is fanned during flight. Females are slightly smaller than males.

## Distribution

The Sprague's Pipit breeds from the foothills of the Rocky Mountains in southern and central Alberta, to west-central and southern Manitoba, and south to southern Montana, northern South Dakota and northwestern Minnesota. The breeding range of Sprague's Pipit occurs mostly in Prairie Canada. Pipits winter in the southwestern United States (primarily Texas, Louisiana, Oklahoma, New Mexico, and Arizona) and northern Mexico.

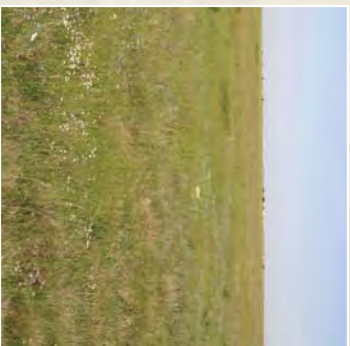
## Sky Dancers

Even though it is tough to spot the pipit on land, when you hear an ethereal tinkling, descending series of notes, look up... way up! The male pipit performs the longest known flight display of any song bird. He delivers a series of slurred, descending notes: "zeer, zeer, zeer zeer zeer zeer". Males can sing up to 100 m in the sky for over 3 hours at a time!



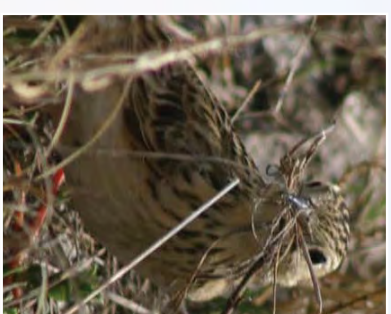
## Habitat

Native mixed-grass prairie is important habitat for Sprague's Pipits. They rarely are found in cultivated lands, or in areas where native grasses have been replaced with planted forage species. Sprague's Pipits are more likely to be found on blocks of prairie larger than 64 ha (165 acres). They sometimes will use older, well-established tame pastures or hayland. As well as preferring native habitat, pipits require vegetation that is not too tall and dense or short and sparse. They need grass that is "just right"! Hence, they earn the nickname **Goldilocks** of the grassland birds.

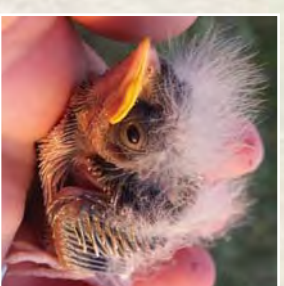


## Nesting

Once a female finds a preferred nesting area, she begins building the nest. She weaves a cup from dry grasses, and covers it partially or completely in a dome of woven grass.



Females usually lay 4-5 eggs between mid May and mid July. Females incubate the eggs for 12-15 days, and the young leave the nest 11-14 days after the eggs hatch. The young are able to make short flights 9 days after leaving the nest. Less than one in three nesting attempts is successful; most eggs and young are eaten by small mammals and birds of prey. Cold, wet weather can also reduce reproductive success due to nest flooding or exposure and starvation.



## Migration

By late September, few Sprague's Pipits remain on the summer grounds. By mid-October, all Sprague's Pipits have left for wintering grounds.



## Life Cycle

**Breeding:** Shrikes return to Saskatchewan in late April and early May. Males set up territories and attract females by singing and posing the territory with impaled prey. Often the same territory is used year after year. A territory can vary in size from less than 4 hectares (10 acres) to greater than 16 hectares (40 acres).

**Nesting:** The male and female begin constructing the bulky, cup-shaped nest towards mid-May. Nests are about 13 cm in diameter and are made of twigs, grasses, forbs, and cattle hair. Nests are usually built about chest height in dense shrubs or small trees, and are strongly defended by both adults.

**Eggs, incubation and chicks:** In late May the female lays 5-8 eggs. Eggs are a grayish buff, with dark markings near the large end. The female incubates for 15-17 days and is fed by the male during this period. The chicks hatch about mid-June and leave the nest about early July.

**Wintering:** The adults and young leave Saskatchewan by about the first of September. They migrate individually, flying up to 3,000 km to their wintering grounds in southern Texas and northern Mexico.



**Did you know?** Late June is the best time of the year to see shrikes. The chicks are beginning to leave the nest and the adults are very active supplying food to their mobile young.

## Causes For Decline

Biologists are unsure why the Loggerhead Shrike's population and range are decreasing; however, habitat loss and degradation are likely the main reasons. Agricultural practices that result in loss of grasslands, shrubs, and natural sloughs, and pesticide contamination are detrimental activities on both the breeding and wintering grounds. Also, as shrikes commonly hunt and nest in shelterbelts along roadsides, they are prone to collisions with vehicles.

## How Can you Help?

Maintaining your shelterbelts in good condition and your pastures for grazing are important ways to keep Loggerhead Shrikes nesting successfully on your land. Other ways you can help:

- Protect abandoned farmsteads, which provide important nesting and hunting areas.
- Plant shrubs and trees in areas where they have been removed.
- Protect nest sites (shrubs and trees) from grazing and rubbing by cattle.
- Conserve native grassland.
- Use moderate stocking rates to conserve soil moisture, thus maximizing forage for grazing and providing suitable feeding habitat for shrikes.
- Reduce pesticide use as much as possible, particularly around nest sites.
- Learn about Loggerhead Shrikes and share your knowledge with others.
- Participate in a stewardship program like Nature Saskatchewan's **Shrubs For Shrikes!**

### Give a HOOT about wildlife!

If you spot a Loggerhead Shrike, call our Toll-Free Line at 1-800-667-4668 (HOOT). Each sighting helps to monitor the shrike population.

60 Years  
OF CONSERVATION

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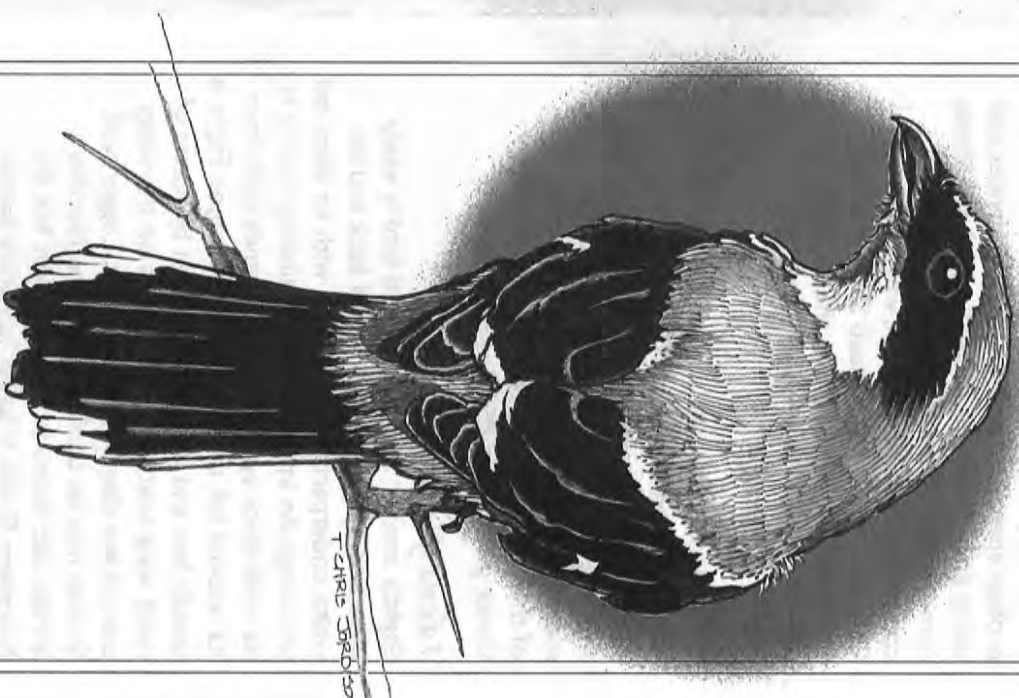
Nature Saskatchewan receives funding from:



May 2009

# Loggerhead Shrike

(Lanius ludovicianus)



Status: Threatened

# What do you get when you cross a songbird and a hawk?

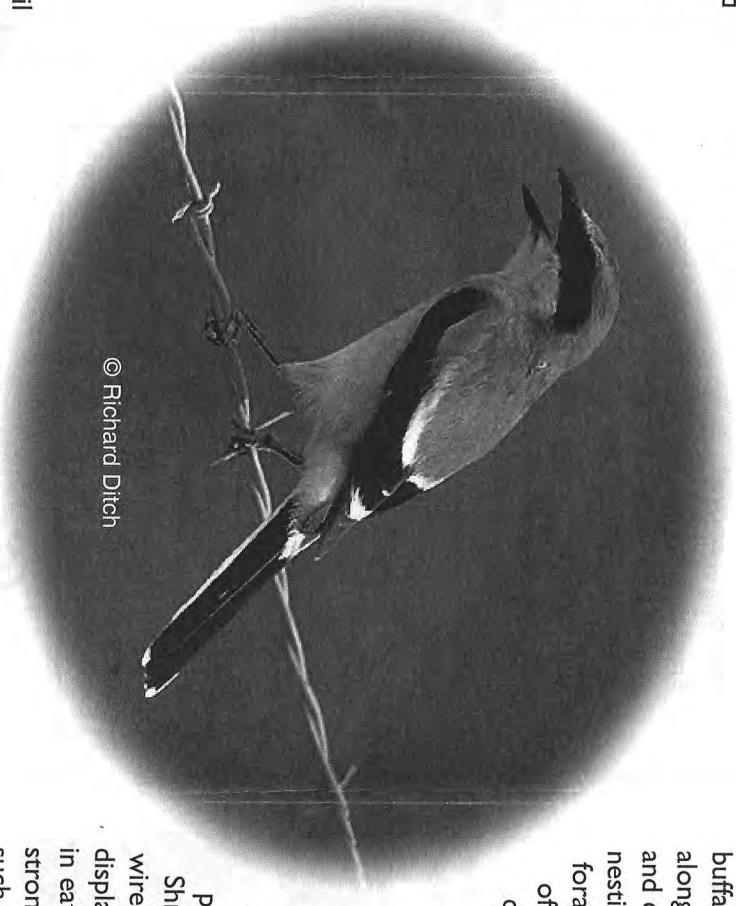
If this were possible, the result would be very close to a species that breeds here in Saskatchewan, the Loggerhead Shrike. Classified as a songbird, this medium-sized avian predator hunts insects, rodents, reptiles, amphibians and small birds and is often seen hunting from roadside fences and utility lines. Since the 1960s, Loggerhead Shrike numbers have declined and their range has contracted. In Saskatchewan, where most of Canada's Prairie Loggerhead Shrikes breed, the greatest declines are in the southeastern corner of the province and the Aspen Parkland region.

**Did you know?** Loggerhead Shrikes have large heads in proportion to their body size when compared with other birds, thus the name "loggerhead," which also means "blockhead." The "shrike" portion of the name comes from the high-pitched shriek given when the bird is alarmed.

## Identification

Slightly smaller than a robin, this bird is easily identified by its gray crown and back and its white underparts that contrast with its black tail and wings. An important distinguishing feature is its wide black eye mask that extends back from its hooked bill, through and past its eyes. Flight is usually low and undulating, broken by bursts of rapid wing beats. White markings on the wings and tail are clearly visible in flight. Loggerhead Shrikes may be confused with the Northern Shrike, also found in Saskatchewan, but the Northern Shrike is larger, has finely barred underparts, and is typically seen only in winter in the southern prairies.

**Did you know?** Other names for the Loggerhead Shrike include thornbird, and butcherbird for their habit of impaling prey on barbed wire and thorny shrubs.



© Richard Ditch

**Distribution**  
The Loggerhead Shrike breeds throughout the Great Plains region of North America and beyond (see map). Shrikes are migratory in the northern portion of their range, including Saskatchewan, but are year-round residents farther south. In Saskatchewan, they are found throughout the southern part of the province with the highest breeding densities in the area south and west of Saskatoon to the United States border.

## Habitat

Shrikes prefer open areas for feeding with nearby shrubs or trees for nesting (particularly native thorny shrubs such as hawthorn and buffaloberry). Fencerows, shelterbelts, shrubs along streams and riparian areas, golf courses and cemeteries are also used as feeding and nesting habitat. Although shrikes are often found foraging over short vegetation, areas comprised of tall grasses (20+ cm) may be required in drier parts of its range in Prairie Canada.

## Food

During the summer shrikes eat mainly insects, however they will use their strong hooked bill to eat rodents, reptiles, amphibians and small birds, particularly House Sparrows. Perched from a high vantage point, they swoop down to attack prey on the ground or in the air. Loggerhead Shrikes often impale their prey on barbed wire or thorns as a way of storing excess food, displaying hunting prowess to females, or to aid in eating large prey without the advantage of stronger talons typical of larger birds of prey such as hawks.

**Did you know?** Loggerhead Shrikes provide a natural pest control service to farmers: they feed extensively on insects such as grasshoppers (up to 75% of their diet) and beetles as well as rodents such as mice and voles.

## Voice

Both females and males sing. In spring a bubbly musical courtship song can be heard, but shrikes are not renowned for their voice and usually emit clicks, peeps and harsh rattles. Often these song units are repeated rhythmically. When alarmed these birds shriek loudly.

# Loggerhead Shrike



Photo by: Bobbie-Lo Macdonnell

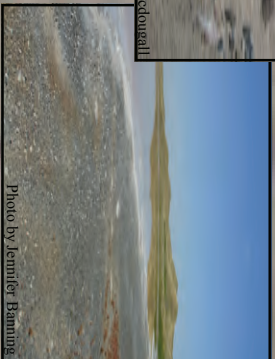


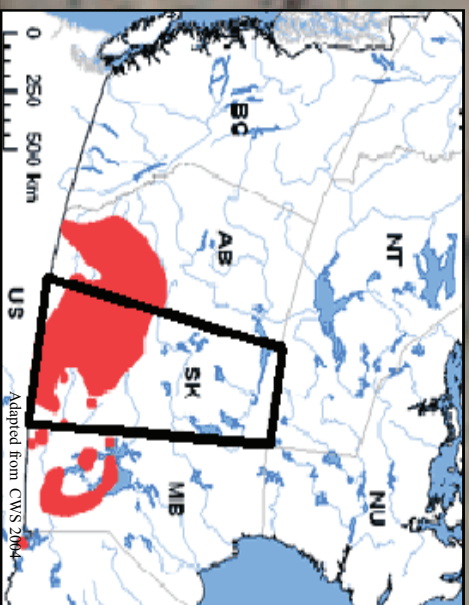
Photo by: Jennifer Banning

## How Can You Help?

- Precautions should be taken to avoid stepping on nests or young during breeding season.
- Increase your knowledge of prairie conservation options and species at risk through educational materials and workshops
- Leave a legacy through a legal agreement to conserve the land you love
- Participate in a stewardship program like Nature Saskatchewan's Plovers On Shore

## Nesting Habitat

- Piping Plovers nest on gravelly or sandy shorelines of saline or fresh water lakes.
- Shallow nests are lined with pebbles collected by the male.



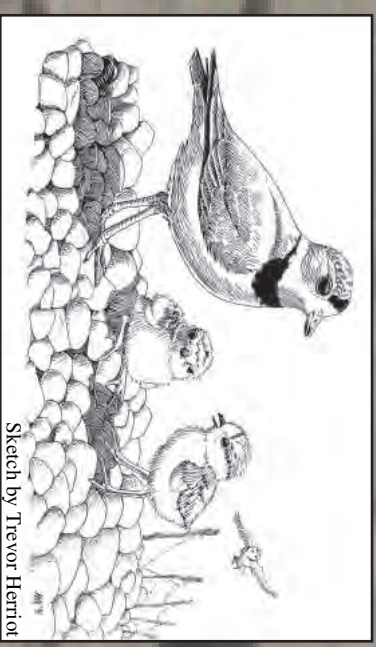
## Distribution

- Piping Plovers nest along the Atlantic coast, the Great Lakes, and the Northern Great Plains.
- The Saskatchewan Piping Plovers are part of the Northern Great Plains population, which extends from the Canadian Prairies south to Colorado.

# Piping

# Plover

*Charadrius melodus circumcinctus*



Sketch by: Trevor Herriot

Status: **Endangered**

To learn more about Plovers On Shore contact:

Nature Saskatchewan  
206-1860 Lorne St.  
Regina, Saskatchewan S4P 2L7  
Toll-Free: 1-800-667-4668 Fax: 306-780-9263  
E-mail: [outreach@nature Sask.ca](mailto:outreach@nature Sask.ca)  
Website: [www.naturesask.ca](http://www.naturesask.ca)



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May 2011



Photo by David Krugloff

- In late March to early April adults migrate north to Saskatchewan. Plovers arrive in the prairies late April to mid-May. By late May females lay 4 eggs over 7 days. Both parents incubate the eggs for 28-34 days.
- In mid to late June eggs hatch and within hours chicks leave the nest to feed. Both parents tend to the chicks.
- By early July chicks begin learning to fly. Until migration in early August, the chicks are practicing to fly while they grow fast in preparation.
- By September all Piping Plovers are migrating up to 3000 km south to the Gulf of Mexico, Alabama, and Florida. They will remain there until early to late March when they will migrate north again.



Photo by David Krugloff



Photo by Brian Sherman

## Identification

- The Piping Plover has a pale, clay-coloured back and head with a white breast and rump. The legs are orange and the bill is orange with a black tip.
- Distinguishing marks include a single neck band and a single black band on the forehead.
- The Killdeer is a similar looking shorebird but is slightly larger, darker and has two neck bands.



Photo by David Krugloff

## Did You Know?

- Canada accounts for nearly 36% of the world's total Piping Plover population, and about 64% of the Canadian population breeds in Saskatchewan.
- An international census of Piping Plovers every 5 years since 1991 has shown Saskatchewan to support more Piping Plovers than any other jurisdiction.
- To protect themselves from danger, plover chicks will crouch motionlessly in the sand and become very difficult to see due to their camouflage. An adult plover lures the predator away, often by pretending to be injured, and then flies away to re-join the chicks.

## Threats

- **Fluctuations in water levels** - At Lake Diefenbaker some nests must be slowly moved back from the water's edge to prevent them from being flooded
- **Human disturbance** - Dogs, all-terrain vehicles, housing and development, garbage attracting predators
- **Livestock** - Ruts being lethal to the young plovers having to feed at the shoreline
- **Predation** - Coyotes, foxes, raccoons, skunks, hawks, gulls, and crows
- **Vegetation encroachment** - Piping Plovers can tolerate only up to 50% vegetation
- **Incllement weather** - affecting nest success



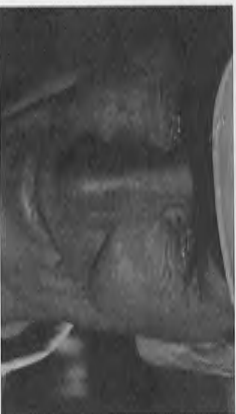
Photo by David Krugloff

## The Importance of Prairie Landowners

- Saskatchewan landowners with Piping Plover habitat play an important role in its survival. Maintaining every available nesting site is important to the Piping Plover's population and to its survival.

## HOW YOU HELP 'EM

Prairie owls need your help. As a landholder, the well-being of wildlife is all part of your day's work.



Small steps that you take can pay off as big rewards to owls and to prairie conservation as a whole. More and more, your land stewardship efforts are being realized and appreciated by all Canadians.

[www.pnr-rpn.ec.gc.ca](http://www.pnr-rpn.ec.gc.ca)

### Burrowing Owl (*Athene curvicularia*)

The Burrowing Owl is the reluctant poster child for prairie conservation; it's unwanted celebrity gained with near-extinction in Canada. With our population crashing as fast as high risk stocks, a mixed group of conservation-minded people have stepped up to the challenge. No-one is more important to the owl than the landowner. With the vast majority of Burrowing Owl habitat on r̄anchland, the owl's future rests in the common sense experience of grassland managers.

### Great Horned Owl (*Bubo virginianus*)

To anyone who was raised on the Canadian prairies, the Great-horned Owl's profile and voice is as recognizable as kin. The Great-horned is most conspicuous at dusk, as it's trademark "eared" silhouette stands out against the night sky. From a high perch, it assumes the night-shift on the farm to hunt.

### Short-eared Owl (*Asio flammeus*)

For the Short-eared Owl who bets it's fortunes on voles, there are good years and bad years. In good years, it's commonly seen flying above dusky fields, bobbing like moths in a street light. In bad years, when the vole numbers are low, the whole calendar can cycle through without a single sighting. The Short-eared Owl nests on the ground among tall grasses.

## THINGS TO KEEP YOUR LAND OWL RIGHT

### maintaining...

- keep on managing your grass for grazing
- if you use pesticides, consider a no-spray zone around nests
- choose less harmful chemicals and follow the directions when applying
- try to avoid working around nests until the owls are done nesting
- drive cautiously when passing nest sites

### improving...

- seed pastures and roadsides with native grasses
- return marginal croplands back to pasture
- control house cats gone wild
- think about leaving a swath of crop or hay
- avoid cultivating near active owl nests
- when possible avoid haying of roadside ditches
- be more tolerant of badgers and ground squirrels

### rewarding...

- celebrate your conservation achievements and those of other landowners
- share the news of your owls with neighbours and people who use your land
- be proud of your role in conserving our natural heritage



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Canada

alberta

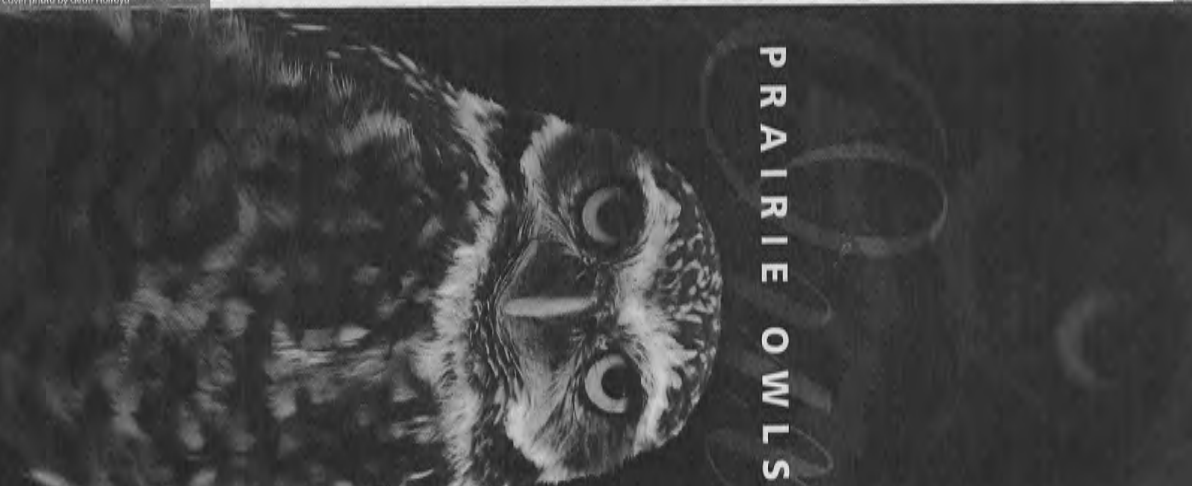
Operation Grassland Community  
780.437.2342 • office@agfa.org

saskatchewan

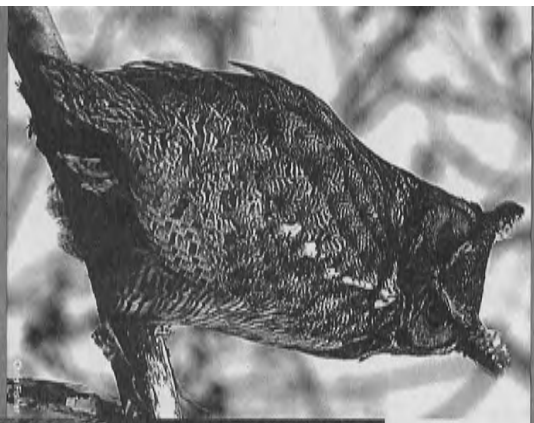
Operation Burrowing Owl  
1.800.667.HOOT  
nature.sask@unlbase.unlbase.com

Cover photo by Geoff Hebold

report  
**YOUR**  
burrowing owls!



PRAIRIE OWLS



Common to see

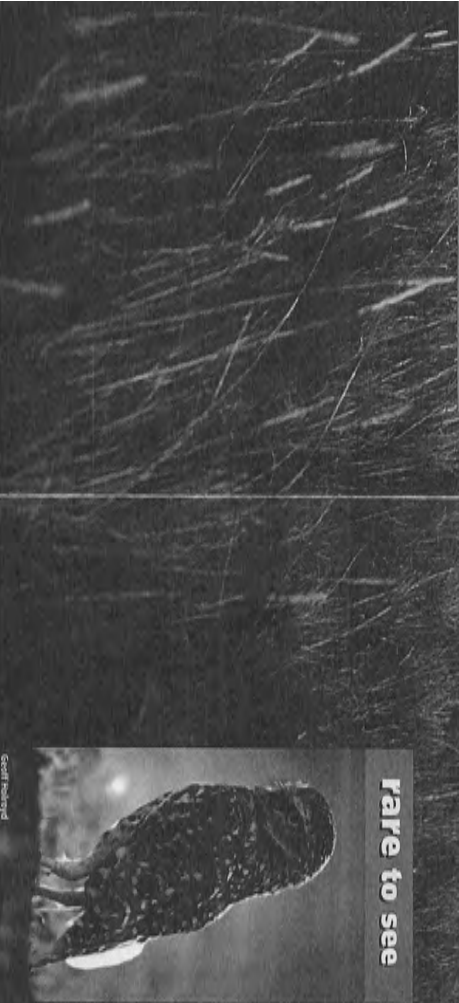
### great-horned owl

Wings that go hunt in the night

Look for: Ear tufts, horizontal belly streaks. Slightly larger than a football.

Look at: Trees or powerpoles. Nests in trees or caves.

Look when: Year round



rare to see

### burrowing owl

A rare egg in a ground hole

Look for: Small size, long legs. Larger than a pop can.

Look at: The ground or fenceposts. Nests underground on short grass.

Look when: May to September



### short-eared owl

Feeds by chances with voles

Look for: Long wings, short legs. Large as a 2 liter pop bottle.

Look at: Posts, ground or over fields. Nests on the ground in tall grass.

Look when: Year round



uncommon to see

# our prairie owls...a hoot's who

## Threats to our EG&S:

The remaining 25% of our prairie grassland and wetlands continues to be threatened by conversion to other uses: cultivation and drainage.

The quality of the water in our lakes and rivers is being degraded by nutrient loading, increased sedimentation from soil erosion, pollution and the continued expansion of exotic invasive species.

Lack of knowledge about the importance of natural capital and the EG&S that it provides continues to threaten its sustainable use and much needed conservation.



Sprague's Pipits prefer parcels of native prairie that are larger than 65 hectares and tend to avoid smaller grassland patches and habitat edges.

## Loss of our EG&S is resulting in:

- 1) Poorer water quality and increased water treatment costs.
- 2) Increased health care costs associated with decreased human health.
- 3) Increased insurance costs (flooding, property damage, crop failure).
- 4) Loss of suitable land for agriculture.
- 5) Decreased property values due to the loss of natural land and the associated aesthetic appeal.
- 6) Irrigation water shortage.
- 7) Water hauling and deeper wells.
- 8) Decreased fish stocks.
- 9) Tourism losses.
- 10) Increased production of greenhouse gases.

## Get involved:

Individuals — Educate yourselves on the importance of natural capital and the EG&S they provide; become active with an organization that conserves natural areas.

Educators — Recognize and incorporate the environmental and economic values of natural capital into your science, social studies, geography and economic courses.

Non-government Organizations — Fund and deliver programs that conserve and restore natural areas.

Government — Provide data on the amount and attributes of natural capital and changes to it over time, supplying decision makers with value upon which to base land use decisions; offer stewardship incentives for those who conserve natural areas; develop policies and legislation to protect our natural areas.



## For more information visit:

[www.ducks.ca/conserv/wetland\\_values/conserv.html](http://www.ducks.ca/conserv/wetland_values/conserv.html)

[www.pcap-sk.org](http://www.pcap-sk.org)

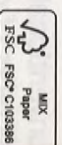


Saskatchewan  
Prairie Conservation  
Action Plan

Box 4752, Regina, SK, S4P 3Y4  
Ph: (306) 352-0472  
Fax: (306) 569-8799  
E-mail: [pcap@sasktel.net](mailto:pcap@sasktel.net)  
Website: [www.pcap-sk.org](http://www.pcap-sk.org)

This Project was undertaken with the financial support of the Government of Canada.

Front cover photo credits: Sprague's Pipit (S. Davis), Antelope (L. Ng)  
Responsibly printed on 30% post-consumer, 50% recycled paper.



# Ecological Goods & Services: What you need to know





**Natural Capital** is the environmental and ecosystem resources (e.g. grasslands, lakes, wetlands, woodlands) that yield **Ecological Goods and Services (EG&S)** (e.g. food production, air and water purification, carbon sequestration, drought and flood protection) that are crucial to the viability of our economy and livelihood.

*Natural Capital provides us with everything from the air we breathe to many of the medicines we use.*

**Grasslands** are North America's most threatened ecosystem and up to 75% of the prairie grasslands have been lost and converted for agricultural production. Grasslands provide us with an abundance of EG&S such as filtering sediment and pollutants before they reach our freshwater sources, increasing water filtration, preventing soil erosion, providing pollination and pest control services essential to agriculture, and providing habitat for numerous plants and animals including those at risk such as the endangered Burrowing Owl and threatened Loggerhead Shrike and Sprague's Pipit, who require grasslands to nest in and produce young.

Burrowing Owls and Loggerhead Shrikes are natural forms of pest control. A family of Burrowing Owls can consume 1,800 rodents and 7,000 grasshoppers in one summer.



**FACT:** Each year, soil erosion on the prairie grassland decreases the profits of crop production by \$6 million.

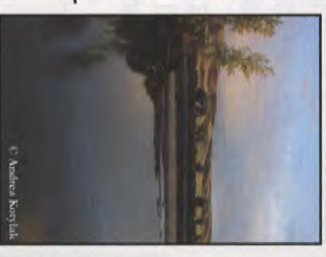
**Wetlands** are one of Earth's most productive ecosystems and also one of the most threatened. In Canada, we have approximately 25% of the world's remaining wetlands. Wetlands provide numerous EG&S such as filtering and recharging our freshwater, helping to prevent flooding, storing greenhouse gases and providing habitat for over 600 wildlife species as well as various tourism and recreation opportunities.



**FACT:** The annual value of all the EG&S generated by 1 hectare of wetlands has been estimated to be between \$5,792 and \$24,330. The draining of just 6 hectares of wetlands releases the same amount of carbon dioxide that would be captured by switching from conventional tillage to zero tillage on 2,000 hectares of cropland.

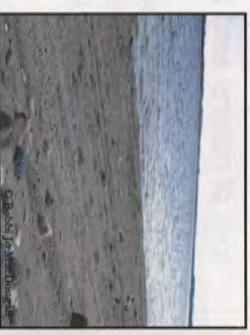
**Lakes and Rivers** play a vital role in sustaining Canada's economy and the quality of life of Canadians.

Lakes and rivers provide us with numerous EG&S such as water sources for municipalities, irrigation, and industry, tourism and recreation opportunities, and habitat and forage for an abundant amount of plants, fish, insects and animals including Species at Risk such as the endangered Piping Plover.



Responsible management practices have positive impacts on EG&S and are also responsible for the recent increase in the number of Piping Plovers in Saskatchewan.

**FACT:** The value of freshwater to the Canadian economy is estimated to be between \$7.5 and \$23 billion annually; amounts that are equal to the gross figures for agriculture and other major economic sectors.



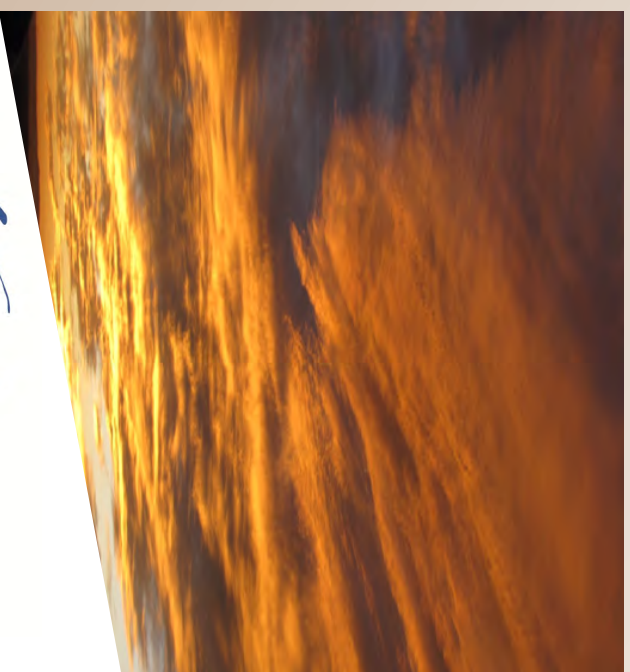
## Local Societies & Affiliates

- Chaplin Tourism Committee
- Fort Qu'Appelle Nature Society
- Indian Head Nature Society
- Kelsey Ecological Society (Preeceville)
- Meadow Lake "Woodlanders" Junior Forest Wardens
- Nature Moose Jaw
- Nature Prince Albert
- Nature Regina
- Neudorf Nature Trails and Wild Bird Nature Sanctuary Society
- Saskatoon Nature Society
- Southwest Naturalists (Swift Current)
- Weyburn Nature Society
- Wolseley Nature Conservation Society
- Yellowhead Flyway Birding Trails Association
- Yorkton Natural History Society

Nature Saskatchewan  
206-1860 Lorne St.  
Regina, SK. S4P 2L7  
Tel:306-780-9273  
Toll free:1-800-667-4668  
Fax:306-780-9263  
E-mail: [info@nature Sask.ca](mailto:info@nature Sask.ca)  
Website: [www.naturesask.ca](http://www.naturesask.ca)



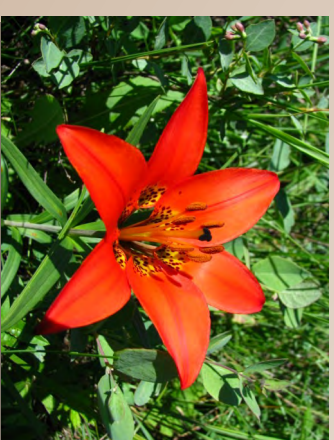
Photo credits: S. Vinge, J. Rumanick, B. Getvaj, K. Burrows  
G. Houston, S. Davis



## Explore, Enjoy and Help Preserve Nature!

Nature Saskatchewan has been dedicated to the conservation of Saskatchewan's natural environment since 1949. With over 800 members Nature Saskatchewan offers programs and services that provide knowledge and experiences for those who have a love for nature.

We believe that nature is not a place to visit, but a home, and strive to leave a legacy of our natural heritage for future generations. We connect nature and culture through outreach programs and services promoting the appreciation and understanding of our natural world through conservation, education, and research.



### Our Mission

We engage and inspire people to appreciate, learn about and protect Saskatchewan's natural environment.



*The Voice of Nature for Saskatchewan*

# Become a Member



## Be Informed

- Scan our monthly e-newsletter for interesting news and upcoming events.
- Read Nature Views, our quarterly newsletter, to keep informed about environmental issues and about our programs.
- Receive Blue Jay, our quarterly journal of scientific research and interesting nature observations in our region.
- Attend our spring and fall meets. Visit unique areas and listen to great speakers.



## Support our Programs

### Stewardship

- Conserve habitat, provide education, and monitor populations through our Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore and Rare Plant Rescue programs.
- Survey our nature sanctuaries.

### Conservation

- Take action to influence governments, business and industry to protect and restore the health of natural ecosystems.
- Promote habitat conservation by stakeholders through our Important Bird Areas program and through our nature sanctuaries.

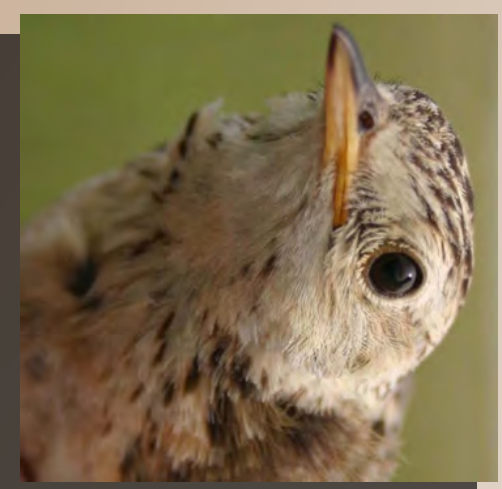
### Education

- Teach youth and adults about migratory birds at the Last Mountain Bird Observatory.
- Develop nature identification skills in youth and adults through our Nature Quest and Inner Nature programs.
- Enable "citizen scientists" to participate in climate change research through our PlantWatch program.



## Be part of the Nature Network

- Our network of local societies and affiliates share information on activities and issues.
- As an affiliate of Nature Canada, we are linked with more than 350 naturalist organizations across Canada.



## Join Nature Saskatchewan today!

Nature Saskatchewan influences important decisions that affect the conservation of our environment. Without your voice, ours becomes a whisper.

- Yes, I want to become a member of Nature Saskatchewan
- I would like to give a gift membership to the person below

Name:

Address:

Postal Code:

Tel:

E-Mail:

Category	1 Year	3 Years	5 Years
Individual	<input type="checkbox"/> \$25	<input type="checkbox"/> \$65	<input type="checkbox"/> \$95
Family	<input type="checkbox"/> \$30	<input type="checkbox"/> \$75	<input type="checkbox"/> \$115
Student	<input type="checkbox"/> \$15		
Senior (age 65+)	<input type="checkbox"/> \$20	<input type="checkbox"/> \$50	<input type="checkbox"/> \$75
Outside Canada	<input type="checkbox"/> \$30	<input type="checkbox"/> \$75	<input type="checkbox"/> \$115
Institutional	<input type="checkbox"/> \$30		
Life*	<input type="checkbox"/> \$600		

\*\$575 is considered a tax deductible donation

Yes, I would like to make a one time donation in the amount of \$

I would like to pay by:

Cheque  Visa  MasterCard

Make cheques payable to **Nature Saskatchewan**.

Card Number:

Expiry date:

Cardholder Name:

Signature:

# Beneficial Management Practices For Species At Risk

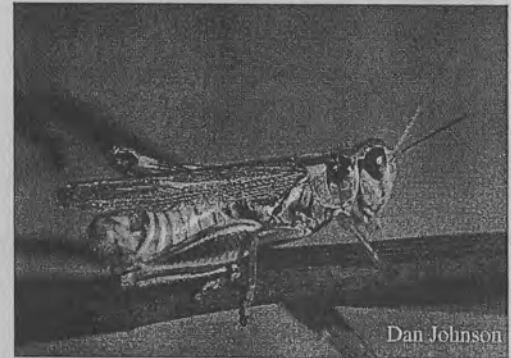
## BURROWING OWL

- ◆ Maintain grassland pastures at least one quarter-section in size, preferably in close proximity to other grasslands.
- ◆ Avoid planting trees or shrubs on native or tame pasture and reduce or remove woody vegetation in native or tame grasslands by burning, grazing, mowing or manual removal.
- ◆ Graze the pasture in a pattern that creates a mosaic of shorter and taller vegetation.



- ◆ Reduce livestock use at nest sites during the nesting and young rearing periods (May through June) and avoid placing salt blocks near nest sites in order to reduce the risk of trampling and collapsing of burrows.
- ◆ Plow fields early, removing potential nest burrows in crop fields before the owls arrive to encourage them to nest in other grassland pastures.

- ◆ Use direct or zero-till seeding during the critical nesting period (May through June) to improve the chances of Burrowing Owl survival.
- ◆ Avoid spraying insecticides that reduce Burrowing Owl prey populations; if insect control is necessary, use an insecticide with the lowest toxicity to non-target organisms and avoid spraying insecticides within 600m of burrows that contain owls during the breeding season.



## PIPING PLOVER



- ◆ Keep livestock away from Piping Plover nesting sites during the breeding season (May to July).
- ◆ Graze shorelines in early spring, late summer, or fall when plovers are not nesting and when the shoreline is dry to prevent pugging and hummocking (holes and mounds).
- ◆ Wetlands should not be drained as they provide more services to the ecosystem than just wildlife habitat, such as water filtration, recharging aquifers and capturing floodwater.

- ◆ Avoid constructing dams or dugouts that divert water away from natural water bodies that are used by plovers.
- ◆ Stagger the timing of withdrawals from water bodies, when possible, to prevent the water bodies from being drawn down too quickly or go dry.
- ◆ If the water needs to be drawn down, do it as slowly as possible (2 to 3 cm per week) in spring and summer to ensure prey availability for the plovers.
- ◆ Provide off-site watering facilities for livestock; this will reduce the disturbance to Piping Plover habitat during the breeding season.



Jennifer Banning



Michelle Yaskowich

## LOGGERHEAD SHRIKE

- ◆ Maintain grassland pastures at least one quarter-section in size, preferably in close proximity to other grasslands.
- ◆ Prevent bird access to grain (clean up spilled grain and store grain in bird and rodent proof bins), and adjust feeding times to the afternoon when invasive species like European Starlings and sparrows are less active.

- ◆ Moderate grazing intensities, durations and frequencies between May and October to create a mosaic of shorter and taller grasses within a pasture.
- ◆ Plant trees and shrubs in areas where they already exist such as upgrading shelterbelts or in abandoned farmsteads.
- ◆ Plant woody vegetation at least 200m from busy roads.



Michelle Yaskowich

60 Years  
OF CONSERVATION  
*Nature*  
SASKATCHEWAN  
1949-2009

*"Humanity in Harmony  
with Nature"*

- ◆ Restrict livestock access to woody vegetation, i.e. shelterbelts, during the spring when these plants are susceptible to damage, as livestock tend to destroy woody vegetation by rubbing.
- ◆ Use prescribed burning to manage woody vegetation and provide variable vegetation structure.

# Stewards of Saskatchewan



## Common Conservation Myths Answered

**Myth 1: If I have a Species At Risk on my land, the government can come and take my land away.**

It is *your* land, and because it is privately owned land, the government has no jurisdiction to take it away. There has *never* been a case in Saskatchewan where the government has taken land away because Species At Risk were found there.



Piping Plover

**Myth 2: Conservation organizations will come in and tell me what to do on my land and how to run my operation if I have Species At Risk.**

If you have Species At Risk on your land, you are *doing something right* and we recommend you *continue* doing what you are doing.

All conservation groups, like Nature Saskatchewan, are here to help by giving recommendations and suggestions on how you can improve your operation and benefit from co-existing with Species At Risk.

**Myth 3: If I have Species At Risk (animal or plant) on my land, I have to fence them off.**

Fencing is usually discouraged as it may draw attention to the Species At Risk and prevent the movement of other wildlife.

Many plant Species At Risk require some amount of disturbance, such as grazing, for their survival.



**Myth 4: If I have Burrowing Owls in a pasture, I am not allowed to graze that pasture.**

*Burrowing Owls thrive with grazing!*

Burrowing Owls need the grass kept short to watch for predators. They also use the manure to line their burrows because it helps to:

- 1) absorb water flowing into the burrow
- 2) hide the owl's scent from predators
- 3) regulate burrow temperature
- 4) attract beetles/insects to the burrow



**Burrowing Owl**

**Myth 5: If I report my Species At Risk, my information will be shared with everyone and I will have conservation organizations coming out to my land all the time.**

Nature Saskatchewan does not share any information reported without permission from the landowner.

Upon granting permission, land locations are given to the Saskatchewan Conservation Data Center (SKCDC) to be entered into their Species At Risk database for industry activities, such as oil and gas.



**Loggerhead Shrike**

**Myth 6: Loggerhead Shrikes eat all of my cute songbirds.**

Loggerhead Shrikes do eat songbirds but birds are only a *minimal* part of their diet. Although songbirds provide more energy for the shrike than smaller prey, it takes more energy to catch a songbird than a mouse or grasshopper.

A shrike's main source of food is insects (grasshoppers/ beetles), although this depends on prey availability.

**We encourage you to report a Species At Risk to our Stewards of Saskatchewan Programs.**

**Please call 1-800-667-4668.**



*Nature*  
SASKATCHEWAN

"Humanity in Harmony with Nature"  
[www.naturesask.ca](http://www.naturesask.ca)



## Nature Saskatchewan's Privacy Policy

We do not share information without permission from the landowner. With landowner permission, we provide the quarter section land location and any species of interest that are found there to the Saskatchewan Conservation Data Centre (SKCDC). We do not, however, give out any personal information about the landowner to any individuals or agencies without first contacting the landowner for permission.

The SKCDC is a partnership between the Province of Saskatchewan and Nature Saskatchewan, and resides in the Fish and Wildlife Branch of the Saskatchewan Ministry of Environment. Standardized information on the ecological status of provincial wild species and communities is gathered, interpreted and distributed by the SKCDC. The SKCDC is committed to the conservation of biological diversity, and is the provincial clearinghouse for threatened and endangered species information.

Information stored at the SKCDC is used to evaluate the status of species across the province in order to determine whether extra protection measures are required or not. Location information and detailed management information is provided, upon request, to development consultants in an effort to protect the species while still encouraging economic activity.

The SKCDC takes the approach that most damage is done through ignorance rather than malice and that, by indicating the presence of a rare species, development will accommodate the needs of species at risk. We indicate as precisely as possible where a species at risk is known to occur so that landowners and developers are not unnecessarily inconvenienced. To balance this, we withhold species name and specific site description unless the requestor has demonstrated a need to know. All requests for access to specific information are screened for this need to know. All users sign a Data Sharing Agreement that strictly limits the uses to which information that is provided can be put.

Developers and those in industry use information at the SKCDC to check for past records of species at risk to ensure the proper environmental assessments are done prior to any development taking place. They are restricted from using this information for any other purpose under terms of a data sharing agreement signed between the SKCDC and the consultant.

In addition, the Stewards of Saskatchewan programs are required to report on our activities to our funding agencies. As part of the requirements for receiving funding from the Government of Canada Habitat Stewardship Program for Species at Risk, we are required to provide the land locations (quarter section level) of lands owned by any new participants in our programs for any given year, as proof of our activities. If the landowner requests their information to not be shared, then we will enter a blank record with no land location. We are also required to submit the land location of any species at risk, unless the landowner requests this be withheld. This information, however, is not accessible to the public and is not used for any other purpose.

If you have any questions or concerns about your privacy or the use of any information, please contact the Nature Saskatchewan office at 1-800-667-4668 (SK only) or speak directly to the Stewards of Saskatchewan program representatives.





## Rare Plants and Ranchers – a Stewardship Solution

- Do you have native prairie with rare plants on it?
  - Would you like to have a professional Agrologist create a beneficial management plan tailored to your ranching operation, for FREE?
  - How about benefitting from a voluntary 50/50 cost-sharing initiative to preserve these plants?

**If this all sounds good, join the “Rare Plants and Ranchers” program today!**

### Program Outline:

Interested landowners are visited by a professional Agrologist who gathers information on:

- Land history
- Invasive species threats
- Management issues
- Grazing and fire regimes
- Any other relevant information



After this information is gathered, a hands-on assessment is carried out to collect site-specific information on the current condition of the land and the rare plant occurrence.

The agrologist then creates a Beneficial Management Practices (BMP) plan, which is given to the landowners. BMP plans outline how current management activities benefit the rare plants, and recommend other management activities that would be mutually beneficial to the ranching operation and the rare plants.

For example, a BMP plan might identify the control of invasive species, such as Leafy Spurge, as a management action that could be implemented. By reducing the spread of noxious weeds, you help improve the range quality for both the rare plants and cattle.

Dollar-for-dollar funding and on-going logistical support is available for landowners who decide to implement any of the recommendations. After implementation, on-

going monitoring allows for the opportunity to adjust any management practices that need adapting.

**\*BMP plans will help you to improve the grazing quality of the rangeland, and to continue to provide a great environment for the rare plants on your land. All recommendations in the BMP plans are mutually beneficial to the ranching operation and the rare plants, and implementation of any or all of the recommendations is completely voluntary\***



Copyright 2012 Chad McDowell (YRHS Photography)

Rare Plants and Ranchers is a joint project offered by *The Native Plant Society of Saskatchewan* and *Nature Saskatchewan* to preserve our rare plant species while helping ranchers improve their grazing operation.

### **Program Benefits:**

- Free consultation, site assessment, Beneficial Management Plan tailored to your land, and ongoing monitoring of any initiated BMP suggestions.
- Increasing the biodiversity and preserving rare species on your land, as well as helping with the collection of data on rare plants and their preferred environments.
- Matching you dollar-for-dollar (as funding allows) for BMP recommendations that you choose to implement.
- Free membership to the Native Plant Society of Saskatchewan, which includes their quarterly newsletter.

**Not sure if you qualify? Give Kristen Martin a call at Nature Saskatchewan: (306) 780-9417 or Chet Neufeld at the Native Plant Society of Saskatchewan: (306) 668-3940.**

*Nature*  
SASKATCHEWAN



**Native Plant Society  
of Saskatchewan**

## LANDOWNER STEWARDSHIP INFORMATION

### NESTS TO DIE FOR - OPEN PIPES

Exposed vertical pipes with open tops pose a tremendous hazard to birds and other wildlife. They are particularly hazardous for birds that either fall into these openings, or enter looking for nesting space. Once inside, birds are unable to open their wings to fly out, and the smooth sides make it impossible to climb out. Inevitably, the birds suffer a miserable, unnecessary death from starvation and exposure.

#### Open pipes are a threat to all birds

Open pipes kill birds indiscriminately. Both common birds and protected species have been found among the layers of dead birds in open pipes. And the destruction can occur in pipes from one to 10 inches wide.

Audubon California staff pulled down a 20-foot-tall ventilation pipe in 2009 from an abandoned irrigation system and discovered a seven-foot-long black mass composed entirely of decomposed carcasses of hundreds of dead birds and animals including kestrels, flickers, bluebirds, and fence lizards. The date etched into the concrete at the base of the pipe showed that it had been in place for more than 50 years.

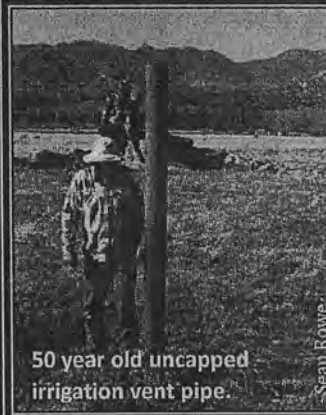
#### Where open top vertical pipes can occur

Open vertical pipes occur in more places than you might think, including:

- Sign posts
- Fences
- Survey markers
- Building plumbing vents
- Irrigation systems
- Chimneys

#### How you can help on your property

- Look around and identify all the open top vertical pipes on your property.
- Cap, close, remove or screen all of them.
- Even pipes placed temporarily will trap birds.
- Put screens over sapling protector tubes, or leave openings at the bottom for birds and wildlife to escape.
- When you visit other properties - public or private - share what you know about the dangers of open pipes.





## **Wildlife Friendly Fences**

*Submitted by Stacey Lieslar, PAg.  
Saskatchewan Watershed Authority, Weyburn, SK*

Wildlife friendly fences are a concept that ranchers may consider in the future when putting up new fence lines. Although wildlife friendly fences are meant to protect wildlife from entanglement, the benefits may also positively affect the rancher. Typical barbed wire fences are thought to entangle one ungulate per year for every four kilometers of fence, as stated by a U.S. study cited in the August 2011 Western Producer. Wildlife friendly fences mitigate these losses by allowing for passage over or under the fence by wildlife, while still containing livestock. Modifications to the top and bottom wires of the fence have shown to alleviate wildlife crossing issues.

Multisar, a multi-species conservation group based in Alberta, suggests a smooth top wire fence being one meter or less in height above the ground. A smooth 45cm high bottom wire can also help wildlife such as antelope and deer fawns crawl under fences with ease. A change that could help mitigate wildlife losses without replacing barbed wire, is placing reflective material or pvc tubing on the top barbed wire so that animals are better able to see the fence and clear it when they jump.

Benefits to the rancher could include reducing the frequency in which the bottom wire is broken due to snow accumulation. The heightened bottom wire can also allow escapee calves to slip back under the fence with less hassle or chance of injury. Perhaps small changes to the way that producers construct fence can eliminate future unwanted repairs due to wildlife.

The following websites provide more information on wildlife friendly fences:

<http://www.multisar.ca/documents/fencingBMP.pdf>

[www.producer.com/Livestock/Article.aspx?aid=39622](http://www.producer.com/Livestock/Article.aspx?aid=39622)

[http://www1.agric.gov.ab.ca/\\$department/newslett.nsf/all/agnw18646](http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw18646)





# Leaving a Legacy

## CONSERVATION EASEMENTS

### Saskatchewan's Natural Landscapes are Disappearing!

*Our landscapes, through natural ecological processes, maintain the health of our planet.*

- Less than 20% of our native prairie remains in a natural state.
- 69% of our aspen parkland has been cultivated
- 40% of our wetlands have been lost

Is this the natural legacy we want to leave future generations of Saskatchewan residents?

### What can an individual landowner do to conserve our natural landscape?

You can leave a **Conservation Legacy** in the form of a conservation easement.



(Photo by Karol Dabbs)

### What is a Conservation Easement?

A conservation easement is a means to conserve its natural and cultural features of a property. It is a legal agreement between a landowner and a qualified conservation agency, in which the landowner voluntarily restricts the type and amount of land use activities that may take place on the property. Terms of the agreement are negotiated to meet mutual interests of both the landowner and conservation agency. Restrictions are tailored to fit the particular property, the interests of the landowner, and the natural features to be protected. The easement is registered with the land's title, and its restrictions are therefore binding on both current and all future landowners.

### The Benefits of Granting a Conservation Easement

With a conservation easement, the landowner continues to own and manage the land. Conservation easements are granted in perpetuity, and thus the natural or cultural features of the property are protected indefinitely, no matter who owns the land in the future. One option that may be appropriate for your land is a paid conservation easement. With this option, the landowner receives a cash payment upon signing the easement agreement. The property is appraised, and the cash value of the easement is often about 25% of fair market value. A second option is to donate a conservation easement as an ecological gift, for which the landowner is eligible to receive a tax benefit in the form of a charitable tax receipt. The value of the donation is the difference between the land's value with the conservation easement and the best land-use value without the easement. Remember, for both options the landowner still owns and manages the land.

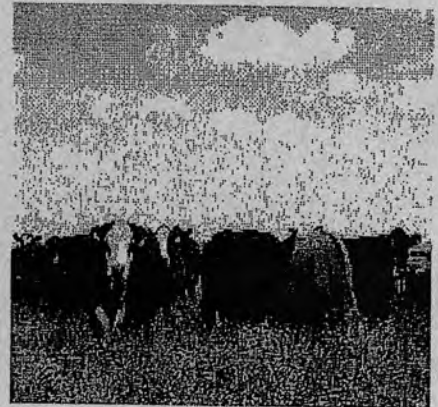


## Who Qualifies?

A landowner who owns property with conservation value, and who wants this value preserved for the future, qualifies for a conservation easement. The landowner's conservation legacy can protect, enhance, or restore a natural area, habitat critical to the survival of wildlife and plants, or significant archeological or historical features.

## Properties of interest may include:

- Lands that support species at risk such as the Burrowing Owl, Loggerhead Shrike, Piping Plover, Swift Fox, or rare plants;
- Lands with ecologically significant features such as native prairie, wetlands, sand dunes, or woodlands;
- Areas of concentration of wildlife such as those used by breeding or migrating birds, or a snake hibernaculum.



(Photo by NCC)

## Working Together to Conserve Our Natural Heritage

There are over 600 land managers across southern Saskatchewan, who are participating in Nature Saskatchewan's Stewards of Saskatchewan stewardship programs and are conserving habitats with valuable natural features. Nature Saskatchewan is working with the Nature Conservancy of Canada to help interested landowners secure a conservation easement to ensure the land they value continues to retain these natural features.

Nature Saskatchewan is a volunteer-driven member-based charitable organization that strives to conserve Saskatchewan's native species and natural ecosystems - our biological wealth. For over 60 years, we have been promoting appreciation and understanding of our natural environment through education and conservation programs, including stewardship with landowners, and natural history publications.

Nature Conservancy of Canada is a leading non-profit conservation organization dedicated to protecting ecologically significant landscapes and natural areas across Canada. Since 1962, Nature Conservancy of Canada has been helping to protect over 2 million acres of natural habitat, including over 100,000 acres of land in Saskatchewan. The Nature Conservancy of Canada has identified priority areas within which it primarily works.

**For more information on leaving a conservation easements, please contact:**

Nature Saskatchewan  
Room 206 - 1860 Lorne St  
Regina SK S4P 2L7  
Ph: 1-800-667-4668  
E-mail: [info@naturesask.ca](mailto:info@naturesask.ca)

Or

Nature Conservancy of Canada  
100 - 1777 Victoria Ave.  
Regina SK S4P 4K5  
Ph: 1-866-622-7275  
Email: [saskatchewan@natureconservancy.ca](mailto:saskatchewan@natureconservancy.ca)



Please mention if you participate in one of Nature Saskatchewan's Stewards of Saskatchewan programs.

(Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, or Rare Plant Rescue)



# Fact Sheet

# CONSERVATION EASEMENTS

## What is a Conservation Easement (CE)?

- A CE is a voluntary legal agreement between a grantor (landowner) and holder (conservation organizations, government agencies or rural municipalities) that is registered against the title for a specified time or in perpetuity.
- The terms of the agreement are negotiated to meet the interests of the landowner and the conservation objectives of the holder, with the main objective being to protect and preserve the biological, physical and cultural attributes of the land.
- It is an opportunity for a landowner to formalize their commitment to long-term conservation of their land that ensures the land will continue to have careful stewardship by future owners.

## What is the legal status of a CE?

- A CE is a legal document that is registered on the title and binds all future owners.
- Once a CE is registered on the title, it can only be removed by mutual consent of the parties (grantor and holder) if the conservation values are no longer met. A CE can also be terminated by the Court of Queens Bench if the landowner can prove severe hardship.
- The only method of 'modifying' a CE is to cancel the original agreement and register an amended version that is mutually agreeable to both parties and is consistent with the original intent for the long-term conservation of the property.
- Each CE is unique and its conditions are negotiable. Activities, not specifically prohibited within the conditions, are allowed.

## Who is eligible to hold a CE in Saskatchewan?

- All levels of government
- Ducks Unlimited Canada
- Meewasin Valley Authority
- Nature Conservancy of Canada
- Nature Saskatchewan
- Saskatchewan Archaeological Society
- Saskatchewan Parks and Recreation Association
- Saskatchewan Watershed Authority
- Saskatchewan Wildlife Federation
- Wakamow Valley Authority
- Wascana Centre Authority

## What are the benefits to a private landowner?

- The main benefit is the assurance that the property will remain in a natural state, regardless of who owns the property in the future.
- It is an opportunity for a landowner to create a legacy for future generations, without giving up private ownership or the use and enjoyment of the land.
- The land may be passed down through a family or sold to any purchaser willing to uphold the CE agreement, all with the assurance that the holder is legally empowered to monitor and enforce the conditions set out in the CE.
- The grantor may receive an income tax incentive on a donated CE, or receive income on a paid CE.



### Under what conditions can a CE be granted?

- A CE can be granted to:
  - protect, enhance or restore natural ecosystems, wildlife habitat or habitat of rare, threatened or endangered plant or animal species;
  - retain significant botanical, zoological, geological, morphological, historical, archaeological, or palaeontological features;
  - conserve soil, air and water quality.
- The CE may be applied to the entire property or just a portion of the property containing the significant natural features.

### Who can grant a CE?

- Any landowner may grant a CE.
- More than one CE can be granted on the same parcel of land if there are no conflicts between the rights and privileges granted and the obligations imposed by the different CEs.

### How restrictive is a CE?

- CEs are voluntary and are negotiated by the grantor and holder.
- Most grantors will negotiate terms that enable traditional land uses to continue.

- The terms of a CE are negotiated depending on the purpose and goals of the agreement.

### Who enforces the obligations of a CE?

- Through the Court of Queen's Bench, obligations may be enforced by the holder, the grantor, a subsequent owner of the land, or at the Court's discretion, an eligible holder.

### Who controls public access on lands with a CE?

- The CE provides the holder access for inspection purposes, however, landowners still retain control of public access.

### Can a CE be transferred?

- A CE can be transferred to another eligible CE holder.
- It is advisable to consult with the holder to identify a mutually acceptable alternate CE holder.



# Conservation Easements • Fact Sheet

## What is a paid CE?

- A conservation agency may offer to compensate a landowner for a CE.
- Typically, the value of a paid CE is linked to the fair market value of the property, based on the CE's conditions, and as determined by an accredited appraiser. The process for determining the value of a paid CE can vary slightly between agencies.

## What are the tax implications of a CE?

- A landowner that donates a CE may be eligible for special income tax incentives. For more information, please refer to the Ecological Gifts Program:  
<http://www.cws-scf.ec.gc.ca/egp-pde>  
(306) 780-5322.
- A property's municipal tax base is not affected by a CE. In most cases, land uses do not change.

## What should landowners consider before signing a CE?

- Signing a CE in perpetuity may affect your resale value and what future owners can do in terms of developing yard sites, cultivation, use of chemicals, as well as commercial, residential, and industrial development.
- Check with your financial institution about whether a CE will affect your ability to use the land as collateral. A CE is an encumbrance (a charge on the property).
- Make sure you know who has access to the CE and who will conduct the monitoring of the CE.
- A CE may have income tax ramifications. It is important to seek professional financial and tax advice.
- Determine if the CE allows flexible management to work around droughts and other natural disasters.
- Learn what activities are allowed. Any use that does not compromise the integrity of the natural habitat may be allowed. Examples include: hunting, outfitting, ecotourism, grazing, hay storage, water development, fence construction and trail development.
- Learn what activities are restricted. Examples include: cultivation; introduction of tame forage species or noxious weeds; and residential, commercial and industrial development. Limits can be put on commercial logging, yet timber and firewood can be removed for personal use. A CE does not necessarily restrict approved development projects such as mineral exploration.
- In most cases, yard sites should not be included in a CE.
- It is important for the CE holder to monitor the CE on a regular basis or the CE could be invalid.
- Determine who benefits from the Ecological Goods and Services derived from the land, and the monetary credits from possible greenhouse gas mitigation, carbon credits, native prairie biodiversity and endangered species protection.





## Prairie Conservation Action Plan

Box 4752, Regina SK, S4P 3Y4

Phone: 306-352-0472 Fax: 306-569-8799

E-mail: [pcap@sasktel.net](mailto:pcap@sasktel.net)

Website: [www.pcap-sk.org](http://www.pcap-sk.org)

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Ministry of  
Environment  
Fish and Wildlife  
Development Fund

### *The Conservation Easement Act*

- *The Conservation Easement Act* came into effect in Saskatchewan in 1997.  
A copy of the legislation is available at Queen's Printer: [www.qp.gov.sk.ca](http://www.qp.gov.sk.ca).

### **CE Information:**

- <http://www.environment.gov.sk.ca/programs-services>. Click "**Land**" then "**Conservation Easements**" or "**Fish and Wildlife Development Fund (FWDF)**"

**Please remember that each situation involving a CE is unique. Whether the CE is donated or purchased, it is recommended that the landowner seek independent legal and tax advice.**

Photos courtesy of Don Fontaine

**PLEASE ENROLL  
ME AS A MEMBER**

**Enclosed is:**

- \$15 1-year student membership
  - \$30 1-year individual membership
  - \$45 1-year family membership
  - \$200 1-year corporate membership
  - \$500 lifetime individual membership
- (payable in installments)

\*Make cheques payable to: Native Plant Society of Saskatchewan\*

**Mailing this card along with your membership fees to:**

**Native Plant Society of Saskatchewan**  
Box 21099  
Saskatoon, SK  
S7H 5N9

**Join us online at:**  
[www.npss.sk.ca](http://www.npss.sk.ca)

The NPSS website includes news and events, information resources, an online store and links to other organizations. The native plant materials listing service connects you with native plant producers and suppliers.

[info@npss.sk.ca](mailto:info@npss.sk.ca)  
(306) 668-3940



**Native Plant Society  
of Saskatchewan**

The NPSS is an environmental charity with members from across Saskatchewan and the rest of Canada.

Everyone involved with the organization believes Saskatchewan's native plants are an irreplaceable natural treasure.

We promote the understanding and conservation of Saskatchewan's ecosystems by facilitating communication, research and education.

## Join Us!

Become an active member within our organization and take a walk on the wild side! Explore the beautiful landscapes in Saskatchewan and join us on an assortment of hikes and activities where we step into nature!

As a member of the NPSS you support valuable activities and essential contributions to the field of conservation and gain exclusive access to hikes and tours found nowhere else! Members also receive our quarterly newsletter and are entitled to discounts on events, publications and merchandise.

## MAILING INFORMATION

First Name: \_\_\_\_\_  
Last Name: \_\_\_\_\_  
Company/Organization Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Town/City: \_\_\_\_\_ Province: \_\_\_\_\_  
Postal Code/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_  
E-mail: \_\_\_\_\_

Yes, I would like to receive my newsletter electronically via my above e-mail address  
 Yes, I would like to be an NPSS volunteer

**Appendix 4**

**STEWARDS OF SASKATCHEWAN 2014-15 NEWSLETTER**





## Woo-HOOT! Burrowing Owl numbers are up!

Kaytlyn Burrows, Habitat Stewardship Coordinator

Summer in Saskatchewan has come and gone and the time has come to prepare and endure for another cold Saskatchewan winter. As much as I wish I could escape to the warm climate of Texas and Mexico like Burrowing Owls do, there is work to be done here. We are hard at work securing funding for next year, for what we hope will be another successful field season.

We may have had a chilly start to the summer in 2014, but that did not seem to deter Burrowing Owls from finding a suitable nest and raising a family. Sightings of Burrowing Owls from program participants and the public increased this year, for the first time in five years. After many hours of compiling the annual census data, I am thrilled to report Operation Burrowing Owl (OBO) participants have sighted 30 pairs. This is a 43% increase from last year's reported 21 pairs! We have also had an increase in public sightings. The HOOT line was used 13 times to report Burrowing Owls.



Two Burrowing Owls spotted by staff this summer. Photo by Kaytlyn Burrows.

The 2014 field season was a record setter! With the help of our diligent and hardworking summer staff, Marika Cameron, Beth Dolmage, and Emily Putz, we conducted a combined 150 visits with current and potential stewards. Of those visits, nine potential OBO participants and 17 current OBO participants were visited. OBO is pleased to welcome five new participants to the program this year! In total, OBO participants are conserving over 59,900 hectares (148,000 acres) of habitat.

Staff hosted two Conservation Awareness Days (CAD) in 2014. The first CAD of the year took place in Eastend on July 17<sup>th</sup>, 2014 with 40 people in attendance, and the second in Elbow on December 4<sup>th</sup>, 2014 with 18 people in attendance. Both included a delicious locally catered roast beef meal. In Eastend, Laura James from Grasslands National Park gave an informative presentation about their Restoration and Resource Management programs, and Natalie Nikiforuk from the Nature Conservancy of Canada discussed Old Man on His Back Ranch. In Elbow, Julie Dukat from Douglas Provincial Park gave a presentation about invasive species control in the park, Renny Grilz from South Saskatchewan River Watershed Stewards discussed their programs, and Corie White from the Water Security Agency spoke about the annual Piping Plover population monitoring at Lake Diefenbaker. We are planning on hosting a third CAD in south western Saskatchewan some time in February.

From all of us at Nature Saskatchewan, I would like to thank our summer staff Marika Cameron, Beth Dolmage, and Emily Putz. The field season was a success because of their hard work and positive attitudes. I would also like to thank Marika for volunteering her time to help complete the census follow-up.

Keep a look out for Burrowing Owls returning to the prairies this spring and as always, if you have any questions or comments about OBO, please do not hesitate to give me a call at (306) 780-9833, toll free on our HOOT line (Saskatchewan and Alberta only) at 1-800-667-4668, or email me at [obo@naturesask.ca](mailto:obo@naturesask.ca).

## Stewards of Saskatchewan are on the Rise

Ashley Fortney, Habitat Stewardship Coordinator

The Stewards of Saskatchewan banner program for all species at risk more than tripled its number of participants over the summer! We received overwhelming support after visiting with 36 current and potential participants, and we are proud of the attitude that Saskatchewan landowners hold towards nature and wildlife. We are grateful to our 29 new participants who are conserving habitat for many species at risk, including Sprague's Pipits, Ferruginous Hawks, Short-eared Owls, Bobolinks, Northern Leopard Frogs, Common Nighthawks, Monarchs, Tiger Salamanders, and Barn Swallows. Our new participants bring the total number of Saskatchewan stewards conserving habitat for non-target species at risk (i.e., not the Burrowing Owl, Loggerhead Shrike, Piping Plover or rare plants) to 38 landowners and land managers, conserving approximately 5,280 hectares (over 13,000 acres).



Ferruginous Hawk (Threatened). Photo by Emily Putz.

We continue to ask Saskatchewanians to keep an eye out for a number of species that are listed as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or protected under the Species at Risk Act (SARA). Our participants, as well as the public, did a commendable job of reporting species at risk this summer. HOOT line calls resulted in sightings of American Badgers, Barn Swallows, Bobolinks, Horned Grebes, Northern Leopard Frogs, Monarchs, Sprague's Pipits, and even Whooping Cranes! SOS staff also made some notable sightings adding Baird's Sparrows, Long-billed Curlews, Ferruginous Hawks, Common Nighthawks, Short-eared Owls, and even sightings of a Swift Fox family and a Gray Tree Frog to the list of species reported this summer. We currently do not send out an annual census for the Stewards of Saskatchewan program for all species at risk, but we are considering the best way to effectively capture population data for the numerous species for which our participants are conserving habitat, and may implement this in the future.

If you would like more information about the Stewards of Saskatchewan banner program, or would like to report a species at risk sighting, please call (306) 780-9832, toll free on our HOOT line (Saskatchewan and Alberta only) at 1-800-667-4668, or email me at [outreach@naturesask.ca](mailto:outreach@naturesask.ca).

## A Shout-out from Shrubs for Shrikes

Ashley Fortney, Habitat Stewardship Coordinator

The Shrubs for Shrikes census is complete and the numbers are looking good! There was nearly twice as many adult Loggerhead Shrikes reported this year compared to last, with 200 adults reported compared to 108 adults reported in the 2013 census. Also, the number of young reported through the census almost tripled, with 93 chicks seen throughout the summer. This considerable increase is very encouraging. On top of the increase in the number of birds reported during the census, there were an additional 50 adults and 47 young reported to the HOOT line from non-participants! A big thank you to all landowners and land managers participating in the annual Loggerhead Shrike census!

Summer assistants, Emily Putz and Marika Cameron, had a great summer visiting with landowners and completing grid road searches for Loggerhead Shrikes and other species at risk. A whopping 86 pairs of Loggerhead Shrikes and 65 young were spotted during road searches and property visits this summer. Further, the Rare Plant Rescue crew reported an additional 31 pairs and 2 juvenile shrikes. In total, Stewards of Saskatchewan staff were able to visit with 23 current participants and discussed our Shrubs for Shrikes program with 54 potential participants (individuals with land where nesting Loggerhead Shrikes were seen). So far, Shrubs for Shrikes has gained 31 new participants this year, an all-time high, and we are still hearing from interested individuals! With the addition of these new participants, Shrubs for Shrikes now has 159 landowners conserving nearly 10,000 hectares (25,000 acres) of habitat for Loggerhead Shrikes.

If you would like more information about Shrubs for Shrikes, or would like to report a species at risk sighting, please call (306) 780-9832, toll free on our HOOT line (Saskatchewan and Alberta only) at 1-800-667-4668, or email me at outreach@naresask.ca.

## Rare Plant Rescue: Adventures in the Field

Kristen Martin, Habitat Stewardship Coordinator

Like many Stewards of Saskatchewan participants who enjoy a ranching lifestyle, Rare Plant Rescue staff are lucky enough to spend our summer days out on the open prairie. This year we conducted searches for plant species at risk on 29 quarter sections, and monitored 64 known plant occurrences on 20 different quarter sections.

We spent June searching for Slender Mouse-ear-cress, first near Burstall and then near Lucky Lake. Unfortunately, the cool spring weather may have hampered the growth of this species; we were unable to locate any new occurrences, and only found plants at one of nine locations we revisited. In July we headed down to Consul, in the southwest corner of the province, and teamed up with a crew from the Saskatchewan Conservation Data Centre for a week of searching for Dwarf Woollyheads. These tiny, mint-green plants occur in ephemeral wetlands, which hold water only for a short time in the spring. We had better luck with this species, and ended up finding 15 new occurrences! From Consul we moved on to Eastend, where we spent some time searching for Tiny Cryptanthe on the hillsides surrounding the Frenchman River. Unfortunately, our searches did not reveal any new occurrences of this species. We then made our way to the shores of the South Saskatchewan River, north of Gardiner Dam, to monitor Small-flowered Sand-verbena and Smooth Goosefoot occurrences. We were very pleased to find plants at 12 of 13 Small-flowered Sand-verbena occurrences that we checked, and all four Smooth Goosefoot occurrences that we checked. We also came across several new occurrences of both species on the quarter sections we were monitoring, which was a pleasant surprise. A survey on an adjacent quarter section also revealed an abundance of new occurrences of both of these species. Finally, we ended off our field season with a week of monitoring Buffalograss near Estevan. It was great to see Buffalograss thriving with livestock grazing, and we found eight new Buffalograss patches while walking between sites.



Kristen Martin searching for Slender Mouse-ear-cress near Burstall, SK. Photo by Beth Dolmage.

We also welcomed five new participants into the Rare Plant Rescue program. These landowners are now part of a community of 80 stewards, whose excellent stewardship is conserving over 103,000 acres of habitat for rare and at risk plants in Saskatchewan. Further, six of our participants took part in the Rare Plants and Ranchers program this year. This program connects ranchers who have plant species at risk on their land with the Native Plant Society of Saskatchewan, which provides logistical support and financial assistance to help ranchers improve both range health and the habitat for the plant species at risk. We are excited that Rare Plants and Ranchers will be continuing in 2015, and we invite any participants with plant species at risk on their land to contact us for more information about participating.

We would like to sincerely thank all of the Rare Plant Rescue participants and landowners that we visited with this summer for their hospitality. It is always a pleasure to hear your stories about the prairies and wildlife – we always learn so much! For those I didn't make it out to see, I sincerely look forward to talking with you in the future. Please find enclosed the latest issue of the Native Plant Society of Saskatchewan's quarterly newsletter, *Native Plant News*, provided to all Rare Plant Rescue stewards compliments of the Native Plant Society of Saskatchewan.

As always, if you have any questions or comments about the program or about rare plants in general, please don't hesitate to contact me by calling (306) 780-9481, toll free on our HOOT line (Saskatchewan and Alberta only) at 1-800-667-4668, or email me at [rpr@naturesask.ca](mailto:rpr@naturesask.ca).

## Piping Plovers Play Hide and Peep

Ashley Fortney, Habitat Stewardship Coordinator

Stewards of Saskatchewan staff had a great time this spring helping out with the annual Piping Plover survey of Lake Diefenbaker, organized by Corie White of the Water Security Agency. Being a thorough survey of such a large area, it was organized in great detail and much effort was put into ensuring minimal disturbance to the birds during the



Adult Piping Plover performing the broken-wing display. Photo by Emily Putz.

assessments. Piping Plovers are very difficult to pick out from the background as their colours camouflage well on gravelly, sandy beaches. Although difficult to find, it was very exciting to discover new Piping Plover nests and see the adults up close. Particularly interesting was observing the vigilance of the parents watching over their nests, peeping and head-bobbing as we approached, and attempting to lure us away with their broken-wing displays.

The Plovers on Shore annual Piping Plover census was completed this fall, and we are very grateful to those individuals who participated. Six participants reported having seen Piping Plovers this year with 13 pairs, 3 singles, and 2 young being reported across 6 sites; similar, but lower than the 19 pairs reported by six participants last year. In addition to the census of Plovers on Shore participants, there were two

calls made to the HOOT line to report 2 adults and 2 Piping Plover chicks. The Rare Plant Rescue crew reported an additional 3 adult plovers as well, bringing the total number of reported birds to 38.

# Stewards of Saskatchewan

Unfortunately, Piping Plovers can be difficult to identify and are often mistaken for their slightly larger cousin, the Killdeer. Plovers also nest in areas that are not often visited during most landowners' daily, or even seasonal, activities. For these reasons, among others, the reporting of Piping Plovers is consistently low compared to our other target species. However, the next International Piping Plover Census is only a couple of years away and should give a good estimate of the Piping Plover population in the province. It will also provide Plovers on Shore with an opportunity to increase its number of participants by likely providing an influx of new plover sightings which will direct our efforts regarding gaining new stewards.

We visited with 12 current and potential Plovers on Shore participants this summer, and we are very happy to have two new participants joining the program. These new participants, adding approximately 2.8 km (1.75 miles) of shoreline conserved, bring the Plovers on Shore numbers to 44 participants, conserving nearly 120 km (74 miles) of shoreline across 124 sites. We also worked with landowners to create Beneficial Management Practices plans for their operations, and are providing funding for a Habitat Enhancement project on land that is designated as critical habitat for this endangered species.

If you would like more information about Plovers on Shore, or would like to report a species at risk sighting, please call (306) 780-9832, toll free on our HOOT line (Saskatchewan and Alberta only) at 1-800-667-4668, or email me at [outreach@naturesask.ca](mailto:outreach@naturesask.ca).

## Thank you to our generous sponsors!



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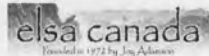
Neotropical  
Migratory Bird  
Conservation Act

This project was undertaken with the financial support  
of the Government of Canada.  
Ce projet a été réalisé avec l'appui financier  
du gouvernement du Canada.

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Nature Saskatchewan receives funding from:



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## We thank the following for their help in program delivery:

Moose Jaw River Watershed Stewards Inc.  
National Burrowing Owl Recovery Team  
Native Plant Society of Saskatchewan  
Nature Conservancy of Canada  
Old Wives Watershed Association  
Operation Grassland Community  
Prairie Conservation Action Plan

Prairie Loggerhead Shrike Recovery Team  
Prairie Piping Plover Recovery Team  
Recovery Team for Plants at Risk in the Prairie Provinces  
Saskatchewan Burrowing Owl Interpretive Centre  
Saskatchewan Conservation Data Centre  
SaskPower Shand Greenhouse  
Sprague's Pipit Recovery Team

A special thank you to our participating landowners and  
volunteers!





## 2015 Winter/Spring Events List

### **December 1-February 28, 2015 – Winter Birding Contest**

Get Bird Active this winter! Go for walks around your area, drive throughout our beautiful province, check out bird hotlines and look for the winter rarities, or just look out your windows into your yard. Keep a Saskatchewan winter bird list of all your findings and then share your list with others. Enter your list in the 26th Annual Nature Saskatchewan Winter Birding Contest. The contest runs from December 1<sup>st</sup> to February 28<sup>th</sup>. Send entries to Boyd Metzler, Box 126, Whitewood, SK, S0G 5C0 or by email to [boyd.metzler@sasktel.net](mailto:boyd.metzler@sasktel.net) by March 15, 2015. You can also contact Boyd Metzler at 306-735-2380 for more information.

### **January and February, 2015 – Environmental Farm Plan (EFP) Workshops, various locations**

EFPs are voluntary, confidential, self-assessment tools used by producers to increase awareness about environmental risks and opportunities on their operations. In January and February, Simply Ag Solutions Inc. will be holding EFP Workshops at the following tentative locations: Swift Current, Shaunavon, Regina, Kerrobert and Rosetown. The dates and times of these workshops will be posted as they become available at [www.simplyag.ca](http://www.simplyag.ca). If you are interested in completing an EFP, please contact Candy at 306-540-5-6757, or Jenny at 306-955-5477, ext. 206 to register.

### **January 17-March 26, 2015 – Ducks Unlimited (DU) Workshops/Banquets, various locations**

The events are fun and action-packed! From black-tie galas to community hall dinner & auctions to clay shoots, DU will have an event that you'll love. Proceeds help them raise funds for on-the-ground habitat conservation programs, scientific research, public policy efforts and wetland education in Canada. Please call 1-800-665-DUCK for more information and to find an event near you.

### **January 21-23, 2015 – Saskatchewan Beef Industry Conference, Regina, SK**

This event will be held at Evraz Place in Regina, SK, and will include a symposium, industry trade show, industry and breed association meetings, and networking opportunities. Please visit the website [www.saskbeefconference.com](http://www.saskbeefconference.com), or contact Shannon, the conference coordinator at 306-731-7610 or [shannon.mcarton@sasktel.net](mailto:shannon.mcarton@sasktel.net) for more information.

### **January 21, 2015, 7:00 pm – Native Prairie Speaker Series, Regina, SK**

Join the Prairie Conservation Action Plan (PCAP) at the Saskatchewan Science Centre for their Technical Speaker Series. Jason Unruh from the University of Regina will be speaking about "The Effects of Oil and Gas Development on Grassland Songbirds". Please contact Tara at [pcap@sasktel.net](mailto:pcap@sasktel.net) for more information.

### **January 28 & 29, 2015 – Native Prairie Restoration and Reclamation Workshop, Saskatoon, SK**

The theme of the 2015 Native Prairie Restoration and Reclamation Workshop is "The Building Blocks of Restoration." The event will take place January 28 & 29, 2015 in Saskatoon at the TCU Place, and Chris Helzer, from The Nature Conservancy as well as "Prairie Ecologist" fame as a keynote speaker! Contact Tara at [pcap@sasktel.net](mailto:pcap@sasktel.net) for more information and how to register.







**February 6 & 7, 2015 – Native Plant Society of Saskatchewan AGM, Saskatoon, SK**

The Native Plant Society of Saskatchewan AGM and conference will take place February 6 & 7, 2015 at TCU Place in Saskatoon. There is an exciting lineup of speakers, including a keynote speaker from “Working Dogs for Conservation”, a non-profit organization in Montana that uses detector dogs to search for rare and invasive plants. There will also be other interesting speakers, as well as a few other surprises that you’ll just have to see for yourself. Please visit [www.npss.sk.ca](http://www.npss.sk.ca) for more information and how to register.

**February 11 & 12, 2015 – Aquatic Invasive Species Workshop, Regina, SK & Saskatoon, SK**

Prairie Waters Working Group is hosting a workshop on Aquatic Invasive Species: Understanding the Issues in Saskatoon (February 11) and Regina (February 12). Of particular concern are quagga and zebra mussels. The workshop will cover identification, prevention, and opportunities for eradication. Contact [info@prairiewaters.ca](mailto:info@prairiewaters.ca) for more information.

**February 19, 2015 – Saskatoon Nature Society, Saskatoon, SK**

Branimir Gjetvaj will deliver a talk titled “Agricultural intensification and the fate of wild nature”. Contact [branimir@shaw.ca](mailto:branimir@shaw.ca) for more information.

**March 12, 2015, 12:00 pm – SK Agriculture Crops Webinar Series: Seeding into Wet Soils**

Join Ken Panchuk, Provincial Soils Specialist with Saskatchewan Agriculture for a webinar on seeding into wet soils and factors to consider. Pre-register at: <https://www2.gotomeeting.com/register/896714762>.

**March 19, 2015 – SustainTech 2015, Saskatoon, SK**

The Saskatchewan Environmental Industry and Managers Association’s first SustainTech is a conference that will promote sustainability and environmental responsibility, and will bring together industry, academia, consultants and regulators to share ideas on new developments and technologies that will help make a better and more sustainable world. The conference will highlight the latest environmental practices and technologies from industry, consultants and regulators in Saskatchewan's resource sectors, including mining, oil and gas, and commercial industries. Please contact [info@seima.sk.ca](mailto:info@seima.sk.ca) for more information.

**March 27-29, 2015 – Gardenscape, Saskatoon, SK**

Now in its 26th year, this consumer trade show is a showcase for the horticulture industry and outdoor lifestyles. If you are interested in sprucing up your yard, want the latest information on gardening and food production, or are interested in specialty flower and vegetable seeds, Gardenscape is for you! Please visit, [www.gardenscapeshow.ca/](http://www.gardenscapeshow.ca/) or call (306) 931-7149 for more information.

**April 13-15, 2015 – 10<sup>th</sup> Annual Saskatchewan Association of Watersheds (SAW) Conference, Melfort, SK**

The 10th Annual SAW Conference is taking place at the Kerry Vickar Centre in Melfort, SK on April 13-15, 2015. SAW’s members will discuss common watershed protection issues, network and learn from one other’s successes and challenges. This year’s agenda includes SAW’s AGM, an address by Keynote Speaker Dr. John Pomeroy, Canada Research Chair in Water Resources and Climate Change, and Dr. Dave Sauchyn, Senior Research Scientist at the Prairie Adaptation Research Collaborative. The Keynote Speaker at the awards banquet features Greg Johnson -“The Tornado Hunter.” Contact [info@saskwatersheds.ca](mailto:info@saskwatersheds.ca) or call (306) 541-9902 for more information and how to register.





**April 22-24, 2015 – Saskatchewan Waste Reduction Council's 2015 Waste ReForum, Saskatoon, SK**

The theme is "Seeing Connections. Realizing Value." Everything is connected. Uncovering the connections helps us arrive at better solutions. The conference also highlights the need for all of us to look at ways we can create shared value - operating our programs and our businesses for the purpose of creating value for ourselves, our communities and the planet. Please visit [www.saskwastereduction.ca](http://www.saskwastereduction.ca) for more information and how to register.

**April 25, 2015 – Saskatchewan Paddling Symposium, Saskatoon, SK**

Help celebrate paddling in the province by coming out and showing your support. Canoeists, kayakers, are all welcome. You'll enjoy speakers talking on topics of interest to paddlers, demonstrations, and interactive workshops. Participate in the silent auction, take in the paddlers trade show, there's even going to be a canoe and kayak show and shine. Please contact Mark Lafontaine at (306) 955-4587 or Bryan Sarauer at (306) 370-3462 for more information.

**May 1 & 2, 2015 – Saskatchewan Living Green Expo, Saskatoon, SK**

The Saskatchewan Environmental Society is excited to host the province's first Saskatchewan Living Green Expo, a festival and trade-show focused on sustainable products and services. The expo will take place at Prairieland Park in Saskatoon, and will provide interested consumers with an opportunity to learn how they can reduce wasteful practices and live more sustainably. The event exhibitors will showcase Saskatchewan's best green products and services. Exhibitor categories will include Health and Wellness, Energy and Green Building, Transportation, and Food and Beverage. In addition, the expo will feature a series of informative presentations and workshops from experts in the field of sustainable and healthy living. Please contact [info@sklivinggreenexpo.ca](mailto:info@sklivinggreenexpo.ca) or call (306) 665-1915 for more information.

**May 23-29, 2015 – NatureCity Festival, Saskatoon, SK**

It's official! The NatureCity Festival will rise again! The focus will be on the relationship between human health and access to healthy/biodiverse natural places. Please contact [wildaboutsaskatoon@gmail.com](mailto:wildaboutsaskatoon@gmail.com) for more information.

**May 29 & 30, 2015 (tentative) – Wings over Wascana Nature Festival, Regina, SK**

More details coming soon! Please visit [www.wascanamarsh.ca](http://www.wascanamarsh.ca) or contact [friendsofwascanamarsh@gmail.com](mailto:friendsofwascanamarsh@gmail.com) for further information on the festival.

**June 15-21, 2015 – Native Prairie Appreciation Week, Prince Albert, SK & Prince Albert National Park, SK**

Mark your calendars! Prairie Conservation Action Plan (PCAP) is looking forward to the 17<sup>th</sup> Annual Native Prairie Appreciation Week! Please keep checking their website <http://www.pcap-sk.org/home> for more details as they become available!

**June 19-21, 2015 – Nature Saskatchewan Spring Meet, Saltcoats, SK**

The Yellowhead Flyway Birding Trail Association (YFBTA) will be hosting the 2015 Spring Meet on behalf of Nature Saskatchewan. The meet will be held Friday, June 19 and Saturday, June 20. Nature Saskatchewan's Annual General Meeting will be held Sunday morning, June 21. The meet will be centered in Saltcoats, SK. Details regarding tours and program, registration deadlines, costs, and accommodations will be posted online at [www.naturesask.ca](http://www.naturesask.ca) as soon as they become available.







## Biobed Pilot Project

Simply Agriculture Solutions Inc. (Formerly the Provincial Council of ADD Boards (PCAB)) is initiating a project piloting the use of biobeds and phytobacs for pesticide rinsate disposal in Saskatchewan. The results of the pilot will ensure that future biobed designs are developed taking into consideration the impacts of prairie climates and will provide information for the adoption of biobeds as an accepted, sustainable, and environmentally acceptable beneficial practice in the future.

This 5 year pilot, coordinated by Simply Agriculture Solutions, will be composed of 11 sites (3 biobeds, 6 phytobacs and 2 controls) in a representative sample of locations across the province of Saskatchewan. The main function of the biobed and phytobac is to reduce the environmental contamination that arises from using pesticides. This reduction is achieved by the biomix adsorbing the pesticide which is then degraded by the active microbial population present in the biobed. The concept of the biobed was developed several years ago in Europe and is widely adopted.

A guidebook for the biobeds and phytobacs will be developed by Simply Ag for participants and Simply Ag field staff. The book will contain step by step instructions for the construction of the biobed, giving the participant clear direction and ensuring that all of the locations are built correctly and uniformly to reduce the margin of error when comparing results from different sites.

Construction of the sites will be done with the guidance of Simply Agriculture Solutions to ensure that the type and structure of biobeds and phytobacs are suitable for the chosen location and as such will be able to provide relevant data. Participating producers (and Simply Ag) will properly monitor and record proprietary data over the course of the biobed's 5 year lifespan, in addition to sampling water and soil media present in the biobed. Effects of seasonal climate changes on pesticide degradation in the biobeds and phytobacs will be monitored and assessed. The data analysis and results collected will be applicable across the Prairie Provinces due to the similarity of climate and landscape.

This pilot will be used to determine if biobeds and phytobacs can operate efficiently under normal use of an agricultural producer, who does his or her own spraying. The participant will use the biobed as it would be used in regular farm situations. Additions of pesticide rinsate to the biobed will be done as the participants produce it from the operation, not on specific dates. This is done to determine how well a biobed would function in real practice.

Participants will get to try these systems for free, but will be required to sample the water and biomix in the biobed annually. The biomix will be sampled before the first biobed use in spring and after summer use, in the fall. The water in the biobed will be sampled prior to first use and after final use in the fall but also periodically throughout the summer.

The pilot project and its results will be used by Simply Agriculture Solutions and its collaborating partners to educate and encourage the use of biobeds and phytobacs in the prairies for pesticide rinsate disposal, serving as a springboard in the establishment of biobeds as a sustainable on-farm Beneficial Management Practice. Recommendations will be made for adjustments and improvements to the construction and maintenance in order to enhance the adaptation in Saskatchewan.

If you would like more information or are interested in applying to participate, please contact Teresa Wahl at (306) 955-5477 extension 208, or by email at [teresa@simplyag.ca](mailto:teresa@simplyag.ca).



**Appendix 5**

**RARE PLANT RESCUE AND STEWARDS OF SASKATCHEWAN MAIL OUTS**



June 13, 2014



Dear participant,

After a busy winter working tirelessly to secure funds and continue our important work, we are excited to get out for another adventurous field season! We would like to thank you for your valuable participation in our programs (Stewards of Saskatchewan, Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, and Rare Plant Rescue). We look forward to getting out and visiting with many of you this summer and meeting up with you at one of our locally catered suppers!

With the addition of 35 new participants in 2013 we now have over 600 participants working to conserve habitat and species (please see attached for specific program and species updates). We hope to maintain our momentum in 2014 and welcome many new participants to our stewardship programs. We are continuing to promote that landowners who are voluntarily conserving habitat for any of Saskatchewan's species at risk can now join the Stewards of Saskatchewan voluntary habitat stewardship program. Participants are eligible to receive the same benefits that the participants of Rare Plant Rescue, Operation Burrowing Owl, Shrubs for Shrikes, and Plovers on Shore enjoy, including a yearly newsletter, calendar, and gate sign (pending funding).

As always, we encourage you to share your positive stewardship stories with us. Your experiences are very valued and your stories can help to engage new participants. Any stories related to your experience as stewards of the land (e.g., a story about your species at risk, a habitat enhancement project or beneficial management practice you have used to benefit the species) would be appreciated so that we might share them with others. Please consider sharing your stewardship experiences with us, whether you have been enrolled in a Stewardship Program for one year or 25! Stories gathered would be shared as anonymous stories (e.g., in the annual newsletter). As always, no personal information will ever be shared.

We have attached a program update(s), events list, and census card(s) (if applicable). Thank you for your continued support for prairie conservation! If you have any questions, concerns, or comments please feel free to contact us at 1-800-667-4668. We would love to hear from you!

Kaytlyn Burrows  
Habitat Stewardship Coordinator  
[obo@naturesask.ca](mailto:obo@naturesask.ca)

Ashley Fortney  
Habitat Stewardship Coordinator  
[outreach@naturesask.ca](mailto:outreach@naturesask.ca)

Kristen Martin  
Habitat Stewardship Coordinator  
[rpr@naturesask.ca](mailto:rpr@naturesask.ca)

Stewards of Saskatchewan (SOS), Operation Burrowing Owl (OBO), Shrubs For Shrikes (SFS), Rare Plant Rescue (RPR) and Plovers On Shore (POS) are landowner stewardship programs that are funded through Saskatchewan Ministry of Environment's Fish & Wildlife Development Fund, US Fish and Wildlife Neotropical Migratory Bird Conservation Act, SaskPower, SaskTel, Elsa Wild Animal Appeal of Canada, Government of Canada Science Horizons Internship Grant, Saskatchewan Ministry of Economics Student Summer Works Program, and HRSDC Canada Summer Jobs. Nature Saskatchewan receives funding from SaskCulture/SaskLotteries.





# Spring Update

Nature Saskatchewan

## Rare Plant Rescue

June 13, 2014

Dear Rare Plant Rescue Participant,

With another long, cold winter finally behind us, we are very excited to be back in the field searching for rare plants and catching up with our stewards. Last year we welcomed four new participants into the program, bringing our total stewardship community to 75. As part of this community, you are conserving 101,149 acres of native prairie habitat for rare plants and other prairie species, all while continuing to use the land as you always have. By conserving prairie habitat, you are ensuring that these rarest of plant species can continue to survive and play their part in a healthy prairie ecosystem. Thank you for your continued stewardship of the land and your valuable participation in our program!

This summer the Rare Plant Rescue (RPR) crew will be travelling throughout southern Saskatchewan looking for new locations of rare plants, re-visiting known rare plant occurrences, and visiting with landowners to talk about conservation. We greatly appreciate your cooperation in allowing us to conduct these searches when they occur on your land. The information we gather will allow us to better understand the needs of our target plant species, and the best way to plan for their conservation. This year we will be near Lake Diefenbaker, Burstall, and down in the south-west corner of the province near Eastend. If you'd like me to stop by this summer for a visit, please feel free to get in touch, and I will do my best to make it out to say hello.

I would also like to remind you of the opportunity to participate in **Rare Plants and Ranchers**, the joint initiative between RPR and the Native Plant Society of Saskatchewan (NPSS). Participation in this program is free and can be ended at any time. Some of the perks include receiving a personalized management plan for species at risk on your land from a Professional Agrologist, a free membership in the NPSS, and access to match funding and logistical support if you choose to implement any management suggestions to improve your operation and benefit plant species at risk. To participate, you must have one of the following plant species at risk on your land:

- Buffalograss
- Dwarf Woollyheads
- Hairy Prairie-clover
- Slender Mouse-ear-cress
- Small-flowered Sand-verbena
- Smooth Goosefoot
- Tiny Cryptanthe
- Western Spiderwort

Hopefully you will get a chance to get out and enjoy summer on the prairies! As always, if you have any questions, concerns, rare plant sightings, or knowledge to share, please feel free to contact me anytime through our toll-free line 1-800-667-4668, through my direct line (306) 780-9417, or by email [rpr@naturesask.ca](mailto:rpr@naturesask.ca). I look forward to another exciting year for the Rare Plant Rescue program and wish you all the best for a productive year as well!

Best Wishes,

Kristen Martin  
Habitat Stewardship Coordinator, Rare Plant Rescue  
Nature Saskatchewan  
Encl.



## 2014 Events List

### **15 - 21 June, 2014 - Native Prairie Appreciation Week with the Saskatchewan Ministry of Agriculture and Ministry of Environment**

Native Prairie Appreciation Week (or NPAW, as we call it!) is a week dedicated to celebrating and raising awareness of this valuable natural resource all across Saskatchewan. **An annual highlight of Native Prairie Appreciation Week is the Annual Society for Range Management Tour. This year's tour will take place June 19 and 20, 2014 in Val Marie, SK at 5PM Thursday and all day Friday.** Called "From Roots to Shoots", you can find the poster and registration at <http://www.pcap-sk.org/>

### **20 - 22 June, 2014 - Grasslands Photo Tour with Branimir Gjetvaj**

The idea behind photo tours is to take participants to exceptional locations to explore and photograph in an informal and relaxed atmosphere. Suitable for intermediate and advanced photographers. See more at: <http://branimirphoto.ca/photo-workshops-tours-western-canada/>

### **20 June, 2014 - Get Muddy in the Molde with Nature Conservancy of Canada Conservation Volunteers in Eyebrow, Central Butte, SK**

Join NCC at our Molde 4 property, located in the beautiful Missouri Coteau, as we plant some new native prairie shrubs and clean up some debris on the property. Contact Kirsten at [saskatchewan@conservationvolunteers.ca](mailto:saskatchewan@conservationvolunteers.ca)

### **20 - 22 June, 2014 - Nature Saskatchewan Spring Meet in Fort Qu'Appelle, SK**

Fort Qu'Appelle Natural History Society will be hosting the Spring Meet on behalf of Nature Saskatchewan June 20, 21, and 22. Please see <http://www.naturesask.ca/get-involved/spring-meet> for more details.

### **24 June, 2014 - Western Beef Development Centre 16th Annual Field Day at Termuende Research Ranch near Lanigan, SK. 9:30 AM - 6:00 PM**

The Western Beef Development Centre's 16th annual Field Day is on Tuesday, June 24, 2014. The theme of the day is "Partnerships in Research", and will feature keynote speakers in the morning and tours and presentations in the afternoon. Registration is at 9:30 – 10:00 AM, no charge. Complimentary noon lunch provided by the Termuende Trust Fund. Steak Supper - \$10. Contact Keri Dalman, Western Beef Development Centre at: [kdalman@pami.ca](mailto:kdalman@pami.ca) or 306-682-5033.

### **25 June, 2014 - Camping with Families Info Session at Sherwood Village Branch Library, Regina, SK with Saskatchewan Outdoor and Environmental Education Association. 5:00 PM – 8:30 PM**

We'll offer practical solutions and advice for novice family campers, including: appropriate gear and clothing; creating a camp menu; nature games and eco-crafts, and choosing a stellar destination. Presented in partnership with Regina Public Library. Registration is required by phoning the library at 306-777-6088 or registering online with your library card at [www.reginalibrary.ca](http://www.reginalibrary.ca).

### **27 June, 2014 - Evening Dune Hike, Douglas Provincial Park. 6:30 PM - 09:00 PM.**

Meet at the Dunes Nature Centre in Douglas Provincial Park. Please bring water, bug spray and wear proper hiking footwear. Contact information: Phone: (306) 854-6266 or email: [DouglasPark@gov.sk.ca](mailto:DouglasPark@gov.sk.ca)

## 2014 Events List

**28 June, 2014 - Yorkton Ravine Ecological Preserve, Ducks Unlimited Tour & Museum Visit with the Yellowhead Flyway Birding Trail Association, Yorkton, SK. 8:00 AM - 1:00 PM**

An early morning bird watch, a Ducks Unlimited tour of a marsh with a guide, and bag lunch at the Western Development Museum. Meet at 8:30 am at Ecological Ravine parking lot. Questions: call Arden 306-744-7730 (cell) or Gerri 306-744-2969 (home).

**4 - 6 July, 2014 - Great Sand Hills Photo Tour with Branimir Gjetvaj**

Suitable for intermediate and advanced photographers. - See more at:

<http://branimirphoto.ca/photo-workshops-tours-western-canada/>

**5 July, 2014 - Buffalograss Ecological Reserve Walk with Nature Regina, Regina, SK. 8AM - 6:00 PM**

Site of the rare Buffalograss. Bring lunch, lots of water, and insect repellent. There are no facilities in the area, and there is a 1-km hike in and out of the area. Share of gas average \$15 assuming four people per vehicle. Leaders: Glen and Maureen Lee. Meet at the RSM parking lot at 8:00 a.m.

**18 July, 2014 - Young Naturalists Butterfly Field Trip, Young Naturalists of Saskatoon, SK. 2:30 PM**

Join naturalist Anna Leighton as we explore the area around the Saskatoon Natural Grasslands and Petturson's Ravine in search of butterflies and their favourite wild flowers. Space is limited. Call 306-975-3042 or e-mail [saskatoonnaturekids@gmail.com](mailto:saskatoonnaturekids@gmail.com) to register or for more information.

**19 - 20 July, 2014 - Hunt for the Lost Treasure of the Southwest with the Native Plant Society in Frontier, SK**

Help us search for the few-flowered evening primrose (*Camissonia breviflora*), a striking little wildflower that hasn't been seen in Saskatchewan in over 40 years! Even if we don't find what we're looking for, there will be plenty to see. Please see <http://www.npss.sk.ca/> for more details.

**26 July, 2014 – Saskatchewan Provincial Parks: Gardiner Dam Visitor Centre Theatre presents Owls on Tour**

The Saskatchewan Burrowing Owl Interpretive Centre is bringing their live burrowing owl exhibit to the park. They will be doing a one hour presentation on this critically endangered species and will answer any questions the public may have. Contact information: Phone: (306) 857-5510 and email: [DanielsonPark@gov.sk.ca](mailto:DanielsonPark@gov.sk.ca)

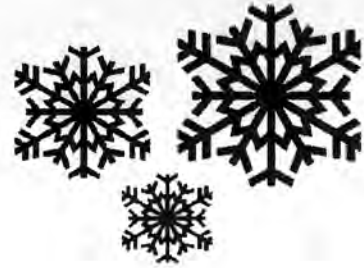
**15 August, 2014 - Young Naturalists Grasslands Hike in Saskatoon, Saskatchewan. 1:00 PM.**

Join the young naturalists as they explore the unique Northeast Swale. It's free, and registration includes a map. Call 306-975-3042 or e-mail [saskatoonnaturekids@gmail.com](mailto:saskatoonnaturekids@gmail.com) for more information.

**13 September, 2014 - Mopping Up in Mortlach with the Nature Conservancy of Canada in Mortlach, SK**

Please join NCC staff at the Mortlach property to take down an old corral, remove some invasive weeds and identify plants and animals depending on these unique habitats. Contact Kirsten at [saskatchewan@conservationvolunteers.ca](mailto:saskatchewan@conservationvolunteers.ca).

**For more information on these events (and more!), please head to Nature Saskatchewan's website, where you can check out our events calendar. [www.naturesask.ca](http://www.naturesask.ca)**



January 12, 2015

Dear Program Participant,

Happy New Year to you and your family from the Nature Saskatchewan staff, and best wishes for 2015! We would like to take this opportunity to thank you for your valuable participation in our stewardship programs (Operation Burrowing Owl, Shrubs for Shrikes, Plovers on Shore, Rare Plant Rescue, and the Stewards of Saskatchewan banner program), and your continued support of prairie conservation. We now have a combined 685 participants, who together are conserving over 289,000 acres of prairie habitat and 73 miles of shoreline for species at risk!

Unfortunately, these accomplishments have been overshadowed by recent events. In April 2014, we received news that our application to the Government of Canada's Habitat Stewardship Program for Species at Risk had been approved; however, a few weeks later we were informed the application had in fact been denied and our original approval notification was due to an administrative error. This represents a major portion of the funding we use for all of the stewardship programs. Due to this loss of revenue, we are unable to provide you with our annual species at risk calendar. Fortunately, thanks to some very prudent decisions made by boards in the past, Nature Saskatchewan has the funds to cover this loss in the short term and allow the staff to press on. We are also working tirelessly to secure funds elsewhere to continue our valuable work, and to be able to bring back the full newsletter and species at risk calendar.

For now, we have included a program update, an upcoming events list, and information on a new pesticide rinsate disposal pilot project coordinated by Simply Ag Solutions Inc. We hope you will enjoy catching up on the latest program news and successes from our 2014 field season.

As always, if you have any questions, concerns, or comments please feel free to contact us at 1-800-667-4668. We would love to hear from you!

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Kaytlyn Burrows  
Habitat Stewardship Coordinator  
obo@naturesask.ca

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Ashley Fortney  
Habitat Stewardship Coordinator  
outreach@naturesask.ca

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Kristen Martin  
Habitat Stewardship Coordinator  
rpr@naturesask.ca



**Appendix 6**

**RARE PLANT RESCUE RECOGNITION CERTIFICATE**





*Nature*  
SASKATCHEWAN

## Certificate of Appreciation

*This certificate is awarded to*

***Steward Name and/or Ranch***

in recognition of their valuable contribution to rare plant habitat stewardship.

Rural landowners play a key role in conserving our prairie habitat and maintaining healthy grasslands. Their good stewardship arises because of close ties to the land from which they derive their livelihood. We recognize that the health of the prairie ecosystem depends on the good stewardship shown by landowners across Saskatchewan!



Rare Plant Rescue  
*A Land Stewardship Program*

Kristen Martin  
Rare Plant Rescue Coordinator

Date





**Appendix 7**

**SAMPLE RARE PLANTS AND RANCHERS PARTICIPANT SURVEY 2014-15**



## Species at Risk Conservation Plan Landholder Questionnaire

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Landowner Name:

Phone number:

Date:

Location:

Interviewer:

### Section 1: History, Land Base and Usage

---

1. How many years have you lived here?
2. (If Applicable/Known) How long did the previous occupants live here?
3. (If Applicable/Known) What management system did the previous occupants have in place, and for how long was this practiced? (use drawings/maps to help describe if necessary)
4. What is the total landbase (ie. acres) of your operation?
  - a. # Deeded:
  - b. # Leased:
5. What acres do the following contribute to the land base of your operation?
  - i. Native prairie
  - ii. Seeded pasture
  - iii. Hayland (and dates of harvest)
  - iv. Cropland
6. How long have the current roads and trails been in place for? (Note any new roads or trails)
7. How long have the current fences been in place for? (Note any new fences)
8. How long have the current buildings and other infrastructure (water troughs, oil wells, etc.) been in place for? (Note any new buildings and/or infrastructure)
9. How many head of livestock are on the property at one time? (Take an average of the year if the number varies greatly.)
  - a. Cattle (bulls, cows calves)
  - b. Horses
  - c. Sheep
  - d. Other
10. Describe the current grazing/land management system (ie. when are the animals out and on which pastures, when do you take them off the pastures, number of grazing days, what kinds of animals are grazing, how many aum's, continuous vs rotational grazing, how you decide to move livestock, etc.). (use drawings/maps to help describe if necessary)

11. How long has the current grazing/land management system been in place? What was in place before that time and for how long? (use drawings/maps to indicate pastures, fences, watering sites, corrals, areas of historical or other importance, etc. to help describe if necessary)
12. Are there any short or long-term projects you plan on completing on your ranch (e.g. add watering sites, fencing, etc.).
13. Do you currently have a long-term plan for your ranch (e.g. plan to sell, expand operations, etc.)?
14. Are there any known issues such as erosion, invasive species, etc.? How long have these been issues? Is there any type of management/mitigation being done to address these issues? (use drawings/maps to help describe if necessary)
15. Have you ever had range or riparian health assessments done on any of your land? If so, by whom?
16. Has any of the land been burned (either on purpose or naturally) and when and where did this happen? (use drawings/maps to help describe if necessary)
17. 11. Do you practice any of the following:

Keeping your native prairie (not plow)	Y	N	n/a
Rotational grazing	Y	N	n/a
Resting pastures	Y	N	n/a
Delaying haying until after wildlife has nested (after July 15 <sup>th</sup> )	Y	N	n/a
Using flushing bars	Y	N	n/a
Seeding fall seeded crops	Y	N	n/a
Using zero or minimal tillage	Y	N	n/a
Maintaining shelterbelts and natural trees	Y	N	n/a
Limiting chemical use around water bodies	Y	N	n/a
Leaving vegetative buffer around wetlands when haying/cultivating	Y	N	n/a
Not draining wetlands	Y	N	n/a
Limiting grazing around wetlands	Y	N	n/a
Removing invasive alien weeds	Y	N	n/a
Minimizing environmental disturbance from industry	Y	N	n/a

## Section 2: Wildlife and Species at Risk

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18. Do you feel that it is possible to run a profitable operation while providing suitable habitat for wildlife?
 

Y	N	unsure
---	---	--------
19. Do you feel that wildlife is beneficial to your operation?
 

Y	N	unsure
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 Please explain your opinions.







**Appendix 8**

**SAMPLE RARE PLANTS AND RANCHERS SPECIES AT RISK BENEFICIAL MANAGEMENT  
PRACTICES PLAN**



of the Native Plant Society of Saskatchewan aimed at  
Ranch Plant Rescue Landowners to develop site specific  
an ecosystem-based approach to address threats such as invasive  
for federally-listed plant species at risk (S/R) and their habitats  
include grasslands, water bodies, trees, shrubs, and wetlands.  
species that are at risk in Saskatchewan have lost their habitat  
urban and industrial development and use have declined in  
ultimately rare in Saskatchewan but still require special attention to

# Rare Plants and Ranchers: Participant Species at Risk Conservation Plan

but you in contact with the  
able to you to help implement  
you have read the report  
act us to discuss what you will  
-7940 or info@npss.sk.ca  
these recommendations to  
least keep in touch!



Chet Neufeld  
Native Plant Society of Saskatchewan  
3/5/2013

Dear [REDACTED],

Rare Plants and Ranchers is a program of the Native Plant Society of Saskatchewan aimed at working with Nature Saskatchewan's Rare Plant Rescue landowners to develop site specific beneficial management plans using an ecosystem-based approach to address threats such as invasive species and habitat loss/degradation for federally-listed plant species at risk (SAR) and their habitats in Saskatchewan. Native prairie habitats include grasslands, water bodies, trees, shrubs, and coulees, each used by different species. Many species that are at risk in Saskatchewan have lost their habitat to cultivation, invasive species and urban and industrial development and are now declining in Saskatchewan. Other species are naturally rare in Saskatchewan but still require special attention to keep their populations healthy. Rare Plants and Ranchers works to maintain and improve habitat for these species by recommending Beneficial Management Practices (BMPs) to landholders that manage native prairie habitats in Saskatchewan.

This Species at Risk Conservation Plan is designed to provide you with BMP recommendations that can be implemented at your earliest convenience. With your help, we can decide what actions will provide mutual benefits to species at risk and to your operation. Please review this report and discuss with us the recommendations. If something we recommend will not work for you please tell us why and we can work together to create a more appropriate action. We want your feedback and we hope to establish an ongoing relationship with you. We are available to give you technical advice, indicate some potential sources of financial assistance where appropriate, and put you in contact with the right people who can help you where we can't.

**For 2013, we have secured \$2,000 in match funding that is available to you to help implement the beneficial management practices suggested in this report. Once you have read the report and considered the beneficial management practices, please contact us to discuss what you will be able to use the money for.**

If you have any questions, please feel free to contact me at (306) 668-3940 or [info@npss.sk.ca](mailto:info@npss.sk.ca)

We hope you find this report informative and that you are able to use these recommendations to enhance species at risk habitat. Thank you for working with us and please keep in touch!

Sincerely,



Chet Neufeld  
Executive Director  
Native Plant Society of Saskatchewan

## **Your Ranch**

On [REDACTED], Native Plant Society of Saskatchewan staff conducted a Species at Risk Conservation Plan on your land near [REDACTED], Saskatchewan. The land that was surveyed included:

Total Acres: 160 (35 native, 125 tame mixture (alfalfa, timothy, slender wheatgrass, cicer milkvetch and meadow brome). Surveys were only conducted on the native portion.

From meeting with you and seeing your land we have learned the following about your operation:

Your ranch consists of a mix of native prairie and tame pasture. The pasture with buffalograss was grazed continuously prior to 2012, but is now grazed in a twice-over rotational system from May 10 until July 1, and then August 1 until October 15.

Although there is no water on [REDACTED], there is a water source with a portable pump on the adjacent quarter ([REDACTED]) for livestock (and potentially wildlife) to use. The pasture shows variation in geography, grazing intensity and vegetative heights which are important habitat features for many species.

The federally-rare plant species on your land is Buffalograss (*Bouteloua dactyloides*). Buffalograss occurs from northern Mexico through the Great Plains of the United States and has its northernmost extent of its range just over the border into Canada. While it can be locally common in the Estevan area, Buffalograss is rare provincially and federally. In Saskatchewan, it can only be found in the Estevan area, occurring from the United States border north to just outside of the city limits of Estevan, and with a limited east-west distribution.

Habitat types on the property include native grasslands, ephemerally wet areas, shrub thickets and lone, small trees. The grassland area is critical to the survival of the Buffalograss on your land, while the grassland, shrub and tree communities provide excellent nesting and perching sites for various bird species as well as escape and thermal cover for all species of wildlife. The ephemerally wet areas are also important for groundwater recharge, and for supporting plants and animals adapted to these habitats.

You are knowledgeable and love your wildlife and would like to do your part in order to improve habitat for species at risk without negatively affecting yourselves financially.

Please see Appendix 1 - Species at Risk Conservation Plan Landholder Questionnaire, as it contains detailed information.

## **Assessment Methods**

Two permanent transects were established on your property; 1 assessed habitat containing Buffalograss, while 1 assessed habitat not containing Buffalograss. For each of these transects, a range health assessment was also completed to determine range condition.

Photos were also taken of all transects, range health assessment sites, infrastructure, species at risk populations and/or individuals, and any issues or subjects of interest, such as invasive species.

## Assessment Results

### Overall Results

From our assessment, we have obtained the following results:

Overall, all habitat types were in good condition and the land is being managed very well, with careful consideration of all factors. Given the limited capability of the soils in the area, productivity was quite good and litter amounts were also appropriate for the site. As of early September when the site was visited, it was estimated that sufficient forage was left to carry over into the next grazing season. However, cattle were still on the land during that time, so will have continued to graze. Tree and shrub communities appeared to be healthy but sparsely occurring due to the limited moisture on site. Shrubs were limited mostly to the shallow coulees and moister depressions. Although prevalent and problematic in the area, Leafy Spurge (*Euphorbia esula*) was not found on the property, which is a very good sign. Moderate amounts of Kentucky Bluegrass (*Poa pratensis*) and sparse amounts of Smooth Brome (*Bromus inermis*) were also found. The dry climate and relatively poor soil may be limiting factors for Kentucky Bluegrass and Smooth Brome. The health and diversity of habitat types on the property offer high quality habitat and food for various species of wildlife; there were some observations of wildlife (common birds) and wildlife sign (tracks and scat). The populations of federal plant species at risk appear to be healthy.

### Transects and Health Assessments

#### Rare 1

This transect began on the southern fence line in the southwest corner of the quarter and extended out into the flat grassland. This transect and the surrounding area scored 82 out of 100, which is in the "Healthy" category. The site lost marks for a slightly altered plant community, reduced vegetation layers (a lack of forbs) and invasive species cover and distribution (Kentucky Bluegrass). Sparse Smooth Brome, Sweet Clover (*Melilotus spp.*) and Alfalfa (*Medicago sativa*) were also noted. However, the site otherwise scored full marks. Buffalograss occurred on approximately ten percent of the transect and appeared to be very healthy with good seed production (mostly female nutlets); however, it was surrounded by heavy Kentucky Bluegrass infestations. Grazing was noted in the immediate vicinity, which will help maintain the Buffalograss by reducing competition from the Kentucky Bluegrass. This is the only population of Buffalograss on your property.

#### Native 1

This transect and the surrounding area scored 77 out of 100, which is in the "Healthy" category. The factors that brought the score down were an altered plant community, a reduced vegetation layer (again, a lack of forbs) and invasive species cover and distribution. Regarding the invasive species found, a few dense patches of Kentucky Bluegrass were found on the site, as were very sparse amounts of smooth brome, crested wheatgrass (*Agropyron cristatum*) and Canada thistle (*Cirsium arvense*). The dominant native grasses were primarily little bluestem (*Schizachyrium scoparium*) and prairie sandreed (*Calamovilfa longifolia*). Both of these grasses provide good forage.

## Species at Risk

Your population of Buffalograss is restricted to a single population in the extreme southwestern corner of [REDACTED]. As previously mentioned, the Buffalograss population appears to be very healthy, and individual plants show good vigour as well. There was no grazing observed on the Buffalograss. Buffalograss is tolerant of grazing and is a good forage plant for livestock and wildlife. It spreads to form patches or mats using stolons, which are above-ground creeping stems that produce new plants when they touch a suitable patch of ground, similar to how a strawberry plant spreads. Because of this, one patch may actually be one plant or a number of plants. Buffalograss is also somewhat different in that it has separate male and female plants; the male plants have seeds held up on a short stalk while the female plants have their seeds enclosed in a bur-like structure that is held down in the leaves of the plant very close to the ground. Your Buffalograss population is likely restricted to its current extent due to the surrounding dense infestation of Kentucky bluegrass. Quite close to where the Native 1 transect was located, a potential patch of Buffalograss was found. However, it was too late in the season and the plants were so badly disintegrated that a positive identification could not be made. The site will have to be revisited to confirm the identification of the plant.

While no other species at risk were observed on your land, there is the potential for many to use your land for habitat and/or food. These species may include, but are not limited to, birds such as Sprague's Pipit, Burrowing Owl, Loggerhead Shrike, Short-eared Owl and Ferruginous Hawk. You also have the potential to support Monarch Butterflies and another rare butterfly called the Dakota Skipper.

## Invasive Species

The following invasive plant species were found on your property:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Distribution</u>
Kentucky Bluegrass	<i>Poa pratensis</i>	Discreet patches throughout
Smooth Brome	<i>Bromus inermis</i>	Very sparse individuals in only a few locations
Crested Wheatgrass	<i>Agropyron cristatum</i>	Very sparse individuals in only a few locations
Canada Thistle	<i>Cirsium arvense</i>	Very sparse individuals in only a few locations
Sweet Clover	<i>Melilotus spp.</i>	Very sparse individuals in only a few locations
Alfalfa	<i>Medicago sativa</i>	Very sparse individuals in only a few locations

Please see Appendix 2 - Maps and Aerial Images, Appendix 3 - Range and Riparian Health Assessments, Appendix 4 - Transect Data and Appendix 5 - Photos for detailed information on assessments results.

## **Beneficial Management Practices (BMPs) Recommended for the Ranch**

It is obvious that you are dedicated landowners who are already doing a great job of managing your land, balancing the needs of yourselves, your livestock and native plants and animals. This is not an easy task. Your land has high biodiversity and supports a healthy community of plant species at risk. This is generally a sign that good management is taking place. Because of this, our recommendations will largely revolve around things you are already doing.



This list of BMP's will help you provide better habitat for species at risk. For additional information please refer to the map provided and the information sheets included in your Rare Plant Rescue toolkit given to you by Nature Saskatchewan.

### **BMP #1 - Native Prairie Conservation**

**Pasture: ALL**

**Managing for: ALL PLANT AND ANIMAL SPECIES**

The most important BMP for all occurring and potential species at risk on your ranch is to maintain native prairie. Native prairie is critical to the survival of the plant species at risk, and key for survival of most wildlife species in the area. Native prairie that remains unaltered provides habitat for species at risk, including germination, growing and seed dispersal sites for plants and nesting, cover, foraging, and breeding habitats for wildlife. The decline of many species at risk can be attributed to the removal and loss of native prairie.

### **BMP #2 - Invasive Species Monitoring and Control**

**Pasture: ALL**

**Managing for: ALL PLANT AND ANIMAL SPECIES**

Another important BMP for your ranch involves monitoring the occurrence and spread of invasive species, particularly Kentucky Bluegrass.

Kentucky Bluegrass can be controlled by grazing to a certain degree, but it will likely never be eradicated from your land as it is too well-established and prevalent in the surrounding area. Grazing the plants earlier in the year and as they are developing flowering stalks will be the most effective at setting the plants back.

It was noticed that the Buffalograss population on your land is more or less surrounded by Kentucky Bluegrass, which appears to be limiting the spread of Buffalograss. This patch of Kentucky Bluegrass could be treated by a small, localized, dormant season fire followed by early season grazing. The fire would remove the thatch that Kentucky Bluegrass forms, and help dry the site out which would give the advantage to the Buffalograss. The early season grazing would then target the Kentucky Bluegrass regrowth, which would again set it back and give the advantage to the Buffalograss.

Both Smooth Brome and Crested Wheatgrass should be treated very aggressively, as they are not very prevalent or well-established on your land. Hand-pulling is an option if you are out on the land and encounter these plants. If the plants have seed on them, be sure to bag and dispose of them. Targeted grazing early in the year is also a good option to control small patches.

As Buffalograss is a warm season grass that starts to grow later in the summer, it will not be affected much by early season grazing (Buffalograss is an increaser under grazing pressure anyway). Also, since Kentucky Bluegrass, Smooth Brome and Crested Wheatgrass are all cool season grasses that start their growth early in the spring, they will be naturally targeted by grazing as they will be some of the only forage plants growing at that time.

Although Alfalfa and Sweet Clover are palatable forage plants, they may continue to spread on the land and may exhibit weedy tendencies, interfering with other desirable forage plants including Buffalograss. Early season grazing will help control seed production and spread of these plants.

While Canada Thistle is sparse on your land, it will continue to spread if not kept in check. Cattle will avoid grazing it, so this is not an effective option. As it is sparse on your land, hand pulling is an option. Using a shovel to sever the roots as deep down as possible will increase the effectiveness, but repeated pulling will be necessary to ensure control of Canada Thistle, as it will continue to regenerate from the roots. Cutting is also an option, but will also need to be repeated due to resprouting from the roots. Targeted herbicide application is another effective way to control Canada Thistle. Either a broad-leaved or non-selective herbicide can be used, but the chances for damage to non-target plants is greater with a non-selective herbicide. Always follow label recommendations when using herbicide, and consult the Saskatchewan Ministry of Agriculture's current Guide to Crop Protection.

Since Kentucky Bluegrass, Smooth Brome and Canada Thistle spread by seeds and creeping roots, it is important that the control method(s) address both means of spread.

### **BMP #3 - Continued Grazing of Prairie**

**Pasture: ALL**

**Managing for: ALL PLANT AND ANIMAL SPECIES**

Grazing is an important BMP as it is essential to the maintenance of basically all of the different habitat types on your property. The level of grazing currently on your property is reasonable, and twice-over rotational system you have in place for this quarter section is appropriate. Grazing is an effective tool that promotes grassland rejuvenation, recycling of nutrients and natural, beneficial disturbance. As an aside, fire is the other major natural disturbance that native prairie historically adapted to and required, but fire is obviously risky, decreases available forage in the short term and prescribed burns should only be conducted by professionals.

Where grasslands dominate, promoting habitat patchiness through various grazing intensities across the landscape (heavy, moderate and light use) will meet the diverse habitat requirements of different grasslands birds. Different grassland birds require different grazing regimes to create suitable habitat. Dispersing livestock more evenly will benefit nesting success and may result in better yields and increased range health. Using techniques such as strategic placement and movement of salt blocks will help to achieve the desired grazing effect. As the only source of water for the livestock in [REDACTED] is in [REDACTED], placement of salt far away from the water source (such as the southern part of [REDACTED]) will encourage the cattle to travel between the two water and salt sites, and will result in better pasture utilization.

### **BMP #4 - Continued Monitoring and Adaptive Management**

**Pasture: ALL**

**Managing for: ALL PLANT AND ANIMAL SPECIES**

Continued monitoring and adaptive management is an effective BMP for long-term success of your operation and the health of the species at risk and provincially-rare plants. While Nature Saskatchewan and the Native Plant Society of Saskatchewan will help to monitor your land, there is no one better to monitor the land than the actual landowner. You are out on a regular basis and have excellent knowledge of the property, and will be the first one to detect a new problem or see if a BMP is working or not. If you need any information to help you with monitoring or tweaking your management practices, you have several options. First, you have the expertise of Nature Saskatchewan and the Native Plant Society of Saskatchewan which includes the free services of a Professional Agrologist. Secondly, you have the Rare Plant Rescue toolkit given to you by Nature Saskatchewan. Third, you have your neighbours, some of who may be able to give advice or share their experiences. If you still need further information Nature Saskatchewan and the Native Plant

Society of Saskatchewan have an extensive list of contacts in the agriculture and environmental fields who will be able to help you.

**BMP #5 - Maintain or Reduce Ecological Footprint**

**Pasture: ALL**

**Managing for: ALL PLANT AND ANIMAL SPECIES**

This BMP is something that you're already doing well, as you indicated that you very careful to treat the sensitive habitat carefully by not using trails excessively. However, even seemingly small changes can have a large impact. New roads, trails, cross fences, or changes to the hydrology of the land can have significant impacts to your property, such as habitat modification or loss, invasion of weeds, loss of species or other detrimental effects, and so should be avoided. Any replacement fencing should be wildlife friendly fencing which is constructed of highly-visible wire with a smooth top wire and a smooth bottom wire placed 18 inches off of the ground. Electric fencing is also very effective and wildlife friendly.

(Appendices not included in RPR Final Report to respect landowner privacy)

## **Appendix 9**

### **RARE PLANT RESCUE SEARCH AND MONITORING PROTOCOLS**



Rare Plant Rescue  
**Occupancy Search and Monitoring Protocols**  
 Nature Saskatchewan 2014

These protocols are generally based on: Henderson D. 2009. Occupancy Survey Guidelines for Prairie Plant Species at Risk. Canadian Wildlife Service, Prairie and Northern Region. Environment Canada

**GENERAL SCHEDULE**

The field season schedule is determined by the optimum times to search for certain plant species (e.g., when the species is most detectable). The general schedule outlines the best times to search for target plant species, but these times may vary with the weather (e.g., wet, cold spring weather will likely push these dates back). RPR should coordinate with CWS to ensure we are working on the priority species and in priority areas. CWS will generally guide our field season activities and therefore the RPR coordinator should be in regular contact with CWS. Below is a chart outlining detectability for most of the RPR target species (Table 1).

Table 1. Best times to search and monitor rare plants by species.

Species (Latin)	Species (Common)	Flowering Time	Fruiting Time	Time of Highest Detectability
<i>Bouteloua dactyloides</i>	Buffalograss	Late June - July	July - Sept.	Aug. - early Sept.
<i>Chenopodium subglabrum</i>	Smooth Goosefoot	Late June - July	July - Aug.	July
<i>Cryptantha minima</i>	Tiny Cryptanthe	June - July	July - Sept.	June - Aug.
<i>Cypripedium candidum</i>	Small White Lady's-slipper	May - June		May
<i>Dalea villosa</i> var. <i>villosa</i>	Hairy Prairie-clover	July - Aug.	Aug. -Sept.	Late July
<i>Psilocarphus brevissimus</i>	Dwarf Woolly-heads	June-July	June-July	June-July
<i>Tradescantia occidentalis</i>	Western Spiderwort	Late June - July	July	Late June - early July
<i>Transberingia bursifolia</i>	Slender Mouse-ear-cress	Late May - June	May-June	Late May - early June
<i>Tripterocalyx micranthus</i>	Small-flowered Sand-verbena	(June) July - Aug.	July-Aug.	June-July
<i>Ambrosia acanthicarpa</i>	Bur Ragweed	Aug. - Oct.	--	August
<i>Astragalus kentrophyta</i> var. <i>kentrophyta</i>	Prickly Milk-vetch	June-July	Aug. - Sept.	June
<i>Atriplex powellii</i>	Powell's Saltbush	June-July	--	--
<i>Botrychium campestre</i>	Prairie Dunewort	May-June	n/a	May-June
<i>Camissonia andina</i>	Upland Evening-primrose	June-July	--	June-July
<i>Lupinus pusillus</i> ssp. <i>pusillus</i>	Small Lupine	June (July)	--	June
<i>Shinnersoseris rostrata</i>	Beaked Annual Skeletonweed	Aug. (July - Sept.)	--	July-August

## OCCUPANCY SEARCH PROTOCOLS 2014

Rare Plant Rescue conducts searches for rare plant species to determine occupancy for a certain species on a certain quarter section. Based on the work of Darcy Henderson at Environment Canada (2009), we may conduct occupancy searches differently for different species. For example, searches for Slender Mouse-ear-cress often entail setting up and searching ten 800m long transects per quarter section. Searches for Buffalograss entail ‘combing’ an entire quarter section. Transect widths and walking speeds also vary by species and habitat (Table 2).

Table 2. Species-specific transect widths and walking speeds for occupancy searches (Henderson, 2009)

Species	Transect Width (m)		Walking Speed (km/hr)	
	Tall/ Dense Vegetation	Short/ Bare Vegetation	Tall/ Dense Vegetation	Short/ Bare Vegetation
Slender Mouse-ear-cress (SMEC)	1	3	1	3
Western Spiderwort (WS)	2	5	1	3
Smooth Goosefoot	1	5	1	3
Tiny Cryptanthe	1	2	0.5	2
Small-flowered Sand-verbena	n/a	5	1	3
Buffalograss	1	5	1	3
Hairy Prairie-clover (HPC)	2	5	1	4

Occupancy searches are designed to determine whether a species is present or absent in a certain area. They are designed such that if the species is not found, it can be said with high enough confidence that the species is absent over that area at that time. For perennial species, this is an indication that the species is indeed absent; for annual or biennial species, this may only mean that plants did not germinate in that area in the particular year; nevertheless, the absence data is still relevant. Occupancy searches must be completed as directed to ensure that any absence data collected is valid based on search-effort.

At present, RPR conducts true occupancy searches for Slender Mouse-ear-cress, Tiny Cryptanthe, Small-flowered Sand-verbena, Western Spiderwort, Smooth Goosefoot, Buffalograss and Hairy Prairie-clover. We do conduct searches for other species, but cannot derive absence data from them even if we do not locate the target species. Occupancy surveys for other species will be incorporated as they become available.

### File Naming

- Files are to be named using the following guidelines on both the GPS units and in mapping software. Consistency in this manner avoids confusion when sorting data later in the year.
- Each quarter section will have a unique code, based on RM
- Occurrences are delineated as described below under “Measuring Area of Occupancy”. RPR Occurrences are roughly equivalent to a Source Feature in NatureServe.
- Occurrences found (for RPR target species) are named with the ¼ section code, which is based on the name of the rural municipality and a consecutive three-digit number; followed by a dash;

followed by the first letter of the genus and species of the plant, and then a two digit number (consecutive following the last found occurrence for that quarter; see Table 3)

Table 3. Process for naming an occurrence of a rare plant species.

Quarter Section (fictional)	Together name a quarter section		Together name the species occurrence		Full Occurrence Label	Explanation
	Rural Municipality	#	-	Species		
NW13-15-29 W3M	Lacadena (LAC)	001	-	<i>Lupinus pusillus</i> (LP)	01	1st ¼ section to be named in RM Lacadena, therefore "LAC001", 1 <sup>st</sup> occurrence of the species on that ¼ therefore "LP01"
NW13-15-29 W3M	Lacadena (LAC)	001	-	<i>Lupinus pusillus</i> (LP)	02	Same ¼ as above, therefore still "LAC001", 2nd occurrence of the species on that ¼ therefore "LP02"
NW13-15-29 W3M	Lacadena (LAC)	001	-	<i>Tripterocalyx micranthus</i> (TM)	01	Same ¼ as above, therefore still "LAC001", 1 <sup>st</sup> occurrence of another species on that ¼ therefore "TM01"
SE13-15-29 W3M	Lacadena (LAC)	002	-	<i>Lupinus pusillus</i> (LP)	01	2nd ¼ named in RM Lacadena, therefore "LAC002", 1 <sup>st</sup> occurrence of the species on that ¼ therefore "LP01"
SE13-15-29 W3M	Lacadena (LAC)	002	-	<i>Tripterocalyx micranthus</i> (TM)	01	Same ¼ as above, therefore still "LAC002", 1 <sup>st</sup> occurrence of another species on that ¼ therefore "TM01"

### Transect Coordinates

- In some cases, we may receive coordinates for transects from the Prairie Plant Species at Risk Recovery Team (e.g. for Slender Mouse-ear-cress)
  - All transects are randomly projected
  - These transects should be at least 10m apart, but in some cases there are errors and they are not. Should this occur, we will project a new transect to replace the one that is less than 10m from a completed transect. Make a note which transect was replaced.
  - 10 transects, each 800m long, will be searched per quarter section when Slender Mouse-ear-cress is the target species.
- In other cases, we may conduct transect set-up in the office before heading out into the field. These cases usually involve stratified sampling where we first target specific habitat types in a certain quarter section, and search only those areas. Search lines may not be conducted in rigid transects in order to follow certain habitat types. Instructions for these cases will be given as needed.

### Projecting Transect Coordinates

When a transect is less than 10 m from another transect, or more than half of the transect is not searchable (e.g. goes through a waterbody, off a cliff, etc) a new transect must be created to search.

- Create a random numbers table in Excel, with numbers between 0 and 800 (one side of a quarter section is 800m long). These random numbers will be used as distances to generate new transects



- Find the northing (if transects are running E-W) of the north or south quarter section boundary, or the easting of the east or west quarter section boundary (if transects are running N-S). Using NTS maps in OziExplorer can be helpful for doing this, or the Sask Interactive map online (through Sask Ministry of Environment).
- Using the distances created in your random numbers table, add or subtract (based on situation) that distance from the northing or easting of the boundary. This will be the northing/easting of the new transect. If it comes within 10 m of another transect, falls outside the quarter section or has more than half of the transect in unsearchable territory (e.g. water body), then move to the next random number in the table and use that to project the new transect.

### **Transferring Coordinates from a Spreadsheet to the GPS**

- When our list of transect coordinates is in spreadsheet form, it would be very time-consuming to retype these coordinates into the Garmin MapSource software we use to load those points onto the GPS
- See “Importing GPS Coordinates into Garmin GPS” in the Appendix

### **Before Going Into the Field:**

- Make sure all relevant transect coordinates have been loaded onto the GPS the night before. Be sure you have more than one quarter section loaded in case you finish early or a problem arises where you can't search the section as planned.
- Charge extra batteries
- Equipment needed:
  - Range pole
  - Pin flags
  - Flagging tape
  - GPS
  - Compass
  - Data sheets
  - Extra batteries
  - Camera

### **Setting Up Transects on the Ground (standard 2-person set up)**

- Find the start point using the GPS. You must be within 5m of the point as indicated by the GPS, with an error of less than 5m ( $\pm 5m$ ). If you cannot get within 5m, hold the GPS out, face up, and wait for it to settle.
- Place a flag at the start point. GPS person (other person will follow) will begin walking in the general direction of the transect, but NOT DIRECTLY ON the path of the transect – we want to avoid crushing vegetation.
  - If flags are obscured by vegetation (e.g. shrubs) use flagging tape to mark the shrub above it
- Walk no more than 100m to place your next flag. If the terrain is hilly, shrubby, etc. then you will need to place flags much closer together. Look back at the start flag often so that you can ensure it is still visible from where you place the next flag.
- Return to the correct northing or easting (meaning you are back on the transect) and place your flag down.

- The person with the GPS will continue walking (OFF the transect) to the next point, while the other crewmember will wait at this second point with the range pole standing up at the point of the flag.
- Once the GPS person has reached their next point, s/he will place a flag down and look back to the other crewmember. The GPS person should be able to see the previous flag(s) leading up to where the crewmember with the range pole is standing. The range pole should line up with previous flags to ensure a straight transect is set-up. If it is not in line, use hand signals to indicate how far the other crewmember should move the flag over.
- Continue until you reach the end point of the transect (800m).

### Searching Transects (standard 2-person)

- The person who had the GPS during set-up will keep it and reference the northing during the search to make sure to stay on a straight line.
- In the event that the GPS coordinates start jumping around while you are still on the transect, pause and wait for it to settle.
- The person who is not watching the GPS will pick up the pin flags on the walk back.
- Walking speed should correspond with the species being searched for and the density of the vegetation being searched (Table 1).
- The range pole or other standard length instrument can be held between the two people to keep them a constant distance apart. The width of the transect is determined in the same manner as the walking speed (Table 1).
- Before beginning the transect, record the start time.
- Begin walking, and sweep the ground with your eyes, with your target species image in mind. If you feel you don't have time to see everything within your half of the transect width, ask your partner to slow down until you get the hang of it.
  - Also keep a search image in mind for other rare species that may be in the area as you may find them incidentally.
- Check your speed periodically to make sure you aren't walking too fast. It is very easy to speed up in the second half of the transect, and even more so during the latter part of the day or field-shift. Speeds can be slower but NOT FASTER than those laid out in Table 1.
- If you think you see something, stop and investigate. It is better to take a second look and find it is not the target species than to brush off seeing a plant that could be the target.
- If you find the target species, record the necessary data on the appropriate data sheet (including properly named waypoint, data about the occurrence, and location).
- Your target species will determine whether you are finished searching the quarter section if you find the species (e.g. whether you need to complete the rest of the transects or not). See the species-specific protocols below.
- If you make it to the end of the transect without finding the target species, record that the transect was completed and no target species were found.

### 3-Person Transects

- Whenever possible, the standard 2-person protocol will be followed as it is more efficient than conducting 3-person transects.
- When needed, 3 people may set up and search transects.
- The transect is set up as with 2 people, with the third person simply following along.

- When approximately 1/3 of the transect has been set up, the third person will begin searching the transect (walking back towards the start point) while the other two continue to set up the transect as usual. A double flag should be placed at this point.
- The third person begins searching on one side of the transect, heading away from the direction that the transect is being set-up. When that person reaches the start of the transect, they will turn around and search the other side of the transect, heading back in the direction that the transect was set up, and stopping when they reach the double flag to wait for the other 2 people.
- The two people will finish setting up the transect to the end and begin searching it as per the 2-person protocol. They will stop searching when they reach the double flag and wait for the single person to finish searching the first portion of the transect.
- The transect search is completed with the single person has searched both sides of the first 1/3 of the transect and the 2 people have searched the other 2/3 of the transect as normal.
- Notes should be made on the data sheet whenever a 3-person transect search is conducted.

### **Habitat Searches (Stratified Random or Stratified Meander)**

- In cases where rigid transects are not efficient (e.g. habitat requirements for a species are well known, and there is only one patch of that habitat present on a quarter section), or search effort needed for absence data for a species hasn't been developed, we will conduct surveys of suitable habitat only.
  - This should not be a call made in the field – as much as possible we will determine this beforehand.
  - In large tracts of habitat, or very patchy habitat with small patches of suitable habitat frequent and widespread, we may project our own transects and use these to search.
  - Where habitat is linear (e.g. shorelines, sand dune ridges) we will conduct searches by following the suitable habitat, even if it means meandering. In this case, we will map or use the tracking function on the GPS to keep track of where our search takes place. We will also record time and use appropriate walking speeds to try and quantify our search effort as much as possible.
- Habitat to search will be determined in advance as much as possible. This will be done using air photos, landscape accounts, topography, etc.

### **Census Searching**

To set up the census search, first lay down a transect across the quarter section on the given northing (quarter section boundary), or follow the fenceline if it delineates a quarter section boundary. The first transect is set up as explained above (when a fenceline is not present). While walking back along this transect and searching, one person will pick up flags while the other will lay flags on the other side of the swath. If there are more than two people, they will be spread out in a line between the two flag people (at an appropriate distance between people, following the guide of transect width in Table 2). Flags will continue to be laid down on the outside of the swath to ensure that the search line is kept relatively straight and no area is missed. Flags must be used; we do not assume we can follow a straight and perfect track back and not miss any area, nor do we assume that the GPS northing alone is a sufficient guide. It is assumed that for this kind of census search, the entire area of the quarter section is covered. At the end of the day, if the site has not been completely searched, the northing of the last swath is noted, and this is where the next day's first transect should be laid. All flags are picked up on the last swath (flags are generally not left out overnight unless the landowner has given permission for this). The target species will determine whether the quarter must be fully censused or not if target plants are found (e.g. whether to continue searching the entire quarter or moving to a new quarter). See species-specific protocols below.

### **Polygon Searches**

Polygons are generally projected in suitable habitat by a partner organization such as CWS since RPR does not have the GIS capabilities to do this kind of work. They are projected based on suitability of habitat, and project-specific metadata is usually provided for each species. Polygons are prioritized according to suitability of habitat, and higher priority polygons should be searched first. Each polygon must first be delineated using pin flags and marking the outline by following the track file on the GPS. When setting up the boundary of the polygon, make sure that you are zoomed in fully on the GPS. Polygons are searched by starting at one end and census searching the entire area. During the search, any target species that are found are marked with different colored pin flags, and once the search is complete, those patches are marked and data is collected as for monitoring (see below).

### **Data Collection during Searches**

The amount and type of data collected if a species of interest is located during searches may vary with the species, the type of search, the goal of the search, and time constraints. At a minimum, a waypoint of the occurrence must be taken so that it can be located again in the future. Generally, if time permits, information on the number of plants in the occurrence, and the patch size, shape and location (e.g., measuring area of occupancy using a track file) will be collected (see below under Population Monitoring for specifics).

### **POPULATION MONITORING PROTOCOLS 2014**

The Rare Plant Rescue (RPR) program will undertake the monitoring of populations of known occurrences of plant species at risk (PSAR) on private land. Priority will be given to populations that are on sites where the landowners are members of the RPR program. Other populations that have been found during RPR searches, but on land where the landowners are not participants of RPR will come second to this, and lastly, RPR may monitor populations discovered by other agencies if time and budget constraints permit. Priority will also be given to populations on land under private ownership, followed by leased crown lands and provincially owned lands.

All population surveys will take place at known locations of PSAR; therefore, occurrence search protocols are generally not needed. If, however, a crew returns to the location of a previously surveyed population and finds it missing, a census search of the immediate area may be initiated to find any remaining plants (see Locating Known Occurrences below).

In general, maps or UTM locations should be available to aid crews in finding plant locations. Where there are a number of different occurrences (whether by clump, group, or individual) on the same quarter section or within a population, each occurrence will be assigned a number and that number used to identify that occurrence in future surveys. Occurrence boundaries (e.g. occurrence mapping) will be recorded using the GPS track function on a time interval between 5 and 10 seconds (at a walking speed around 2-4 km/hr). Tracks shouldn't be started until the location error has stabilized at or less than +/- 5m.

Visits will be made to annual and biennial plant populations every year or every second year, with consideration given to cases where invasive species or human impact pose a direct threat to the population, or when landowners request a visit in consecutive years. Visits will be made to perennial populations every five years. This will be subject to time and budget constraints.

In order to monitor PSAR populations we want to try and determine if there are any significant changes in plant population numbers and distribution. We are also trying to determine if there are any correlations in land changes that may be occurring with changes in plant populations, so that studies can be done to determine causation relationships between land management practices and population health, eventually yielding best management practices for different rare plant species. When possible we will gather data on:

- PSAR distribution
- PSAR numbers or percent cover (Buffalograss)
- PSAR phenology & relative health
- Soils
- Associated plant communities
- Land forms and site conditions
- Perceived threats (e.g. invasive species)
- Land use

At present, these protocols are not scientifically rigid, as monitoring for plant species at risk is difficult and presents several problems, the solutions to which are not yet agreed upon. Some of the information we collect is not useful to the Prairie Plant Species at Risk Recovery Team (PPSARRT) because of its more anecdotal nature, however it may be useful for other projects. All the same, RPR strives to conduct this monitoring in a manner that provides useful and relevant data (with landowner permission) to the Prairie Plant Species At Risk Recovery Team to further the knowledge about what affects these rare species.

### **Locating Known Occurrences**

(note these protocols for locating known occurrences are not based on Henderson's work)

Staff will use the GPS to navigate to the existing occurrence waypoint. Once staff are within about 25m of the waypoint, they should begin to watch the ground carefully to ensure no plants are crushed as the waypoint is approached. In the event that no plants are found once the waypoint is reached, a quick search of the immediate area should be undertaken to look for plants, with care being given as to where staff are walking. If this cursory search does not reveal any plants, staff will set up a square polygon around the waypoint and conduct a census search within it to try and locate plants at the occurrence (Figure 1). Setting up a square polygon is logistically easy and allows for a minimum circular area to be searched. To set up the polygon, staff will use the GPS, as it's navigating to the waypoint, to walk 15m directly north of the waypoint, and place a flag at that point. Staff will then walk around (not through) the polygon to also set up a flag 15m directly east, south and west of the waypoint. While the corner flags are being set up, the second staff member will walk a straight line between corner flags (e.g., heading NE between the east and north corner flags), flagging the line as they go to create a boundary within which to search. This set up allows for a circle of radius 10.6m, centred on the waypoint, to be searched (as well as additional area around it, see Figure 2). Searching a 10 m radius circle (and additional area in the corners) ensures that enough ground is covered to locate plants at that occurrence if the original waypoint taken was subject to some error by the GPS. In addition, because annual plants may have moved from the original waypoint, this ensures a suitable amount of area is searched to locate plants within the original occurrence boundary.

Once this boundary has been set up, the two staff will census search (see above) the polygon. If, after the census search is complete, no plants are found, a "0" will be recorded for the number of plants at that occurrence for the given year. If plants are located within the search area, this will be considered

the original occurrence, and the steps for measuring area of occupancy and determining population size (see below) will be followed. If plants are found outside the search area, they will be considered a new occurrence (if for an annual or biennial species).

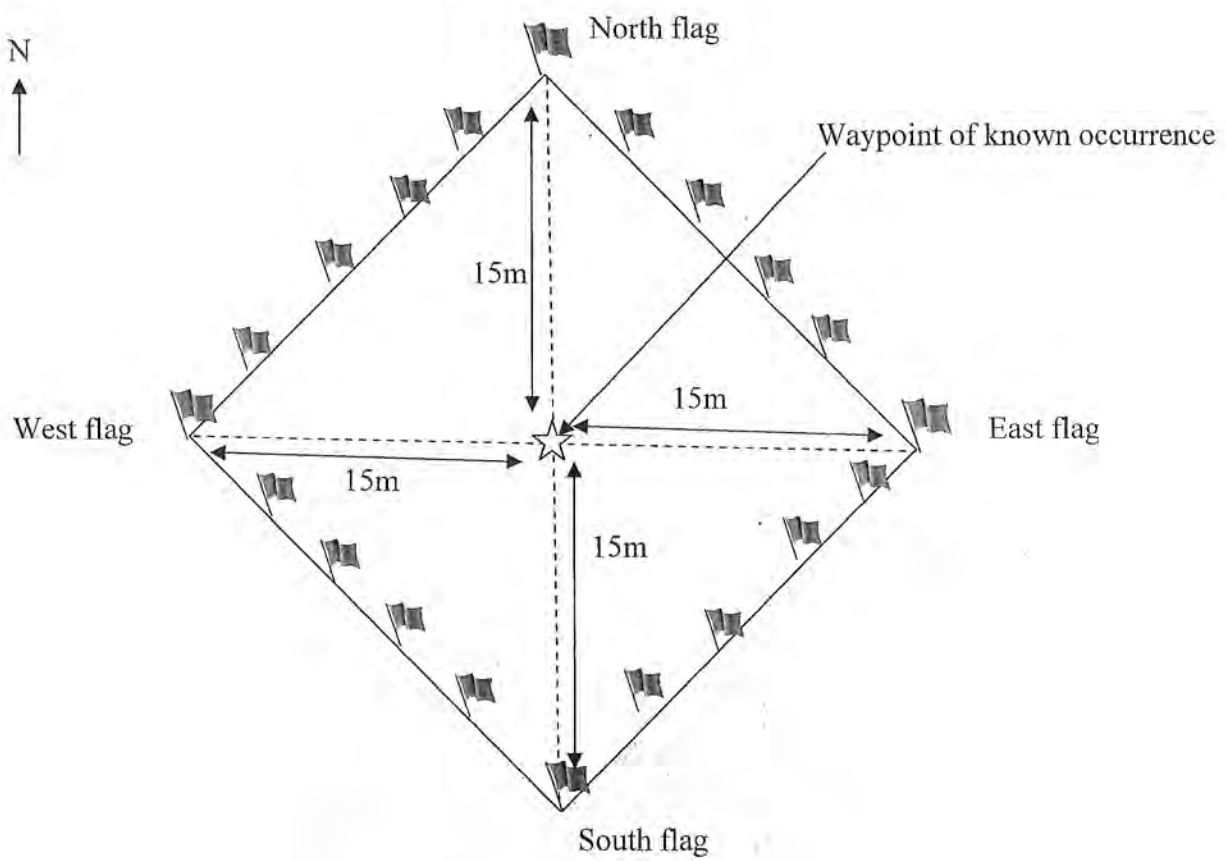


Figure 1. Example of a monitoring set-up for a census search of the immediate area when plants cannot be located during a cursory search.

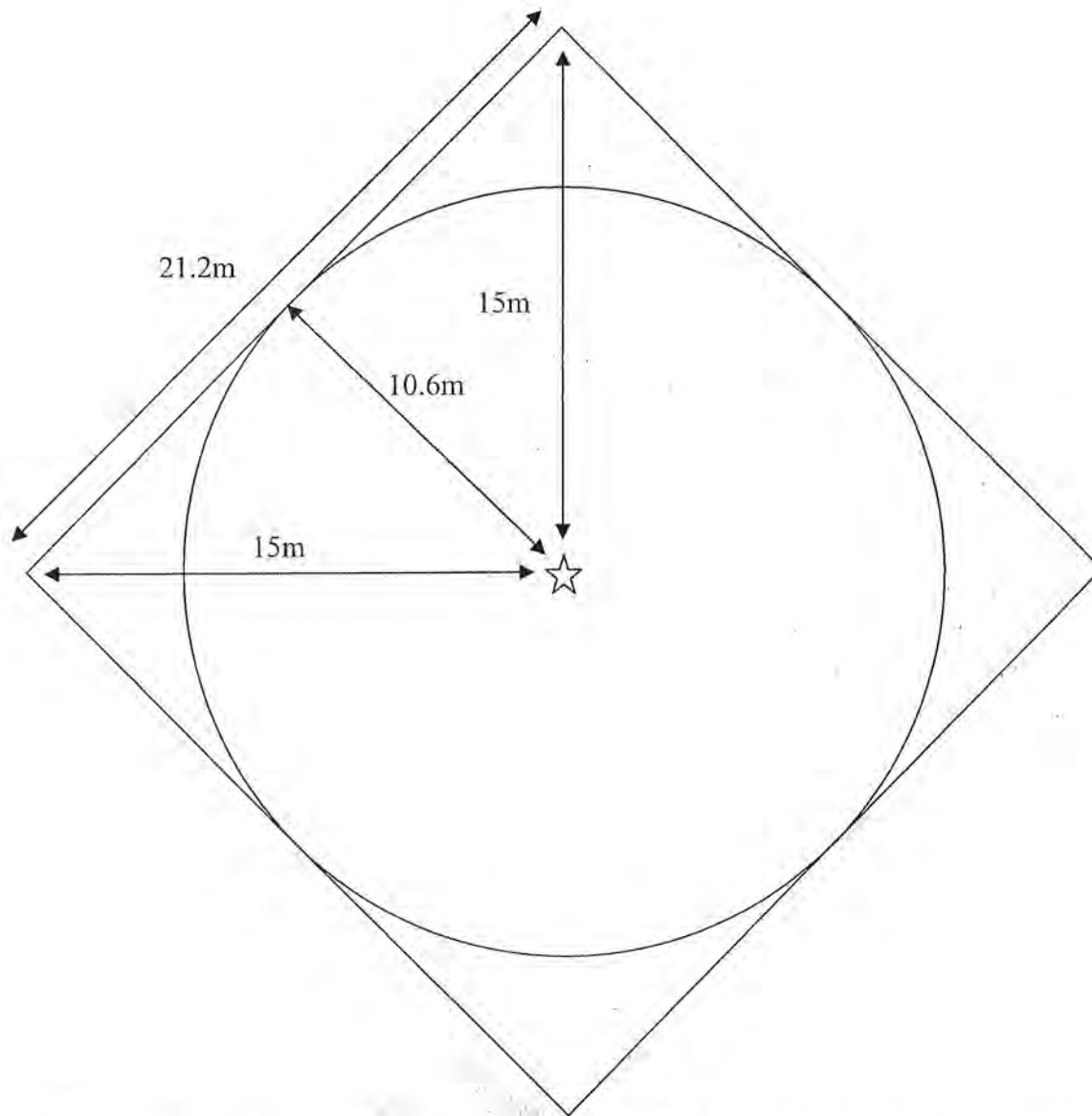


Figure 2. A square polygon set up with corners placed 15m away from the waypoint allows for a circle of 10.6 m radius to be searched, as well as additional area in the corners outside the circle (figure is to scale).

### Measuring Area of Occupancy

Once the occurrence is located, an initial survey of the area will be conducted to place pin-flags at the boundaries of the area of occupancy, to later assist the person recording it with the GPS. For perennials such as Hairy Prairie-clover, 30 m is the distance that will separate occurrences, unless there exists a significant change of habitat between patches that are <30 m and >10 m apart (such as a wetland, dense shrub patch, ridge, etc). Buffalograss is a perennial that is an exception to this guideline. The edges of a Buffalograss clone are typically well-defined and a distance of 5 m is more suitable to separate occurrences. For annuals or biennials such as Slender Mouse-ear-cress or Small-flowered Sand-verbena, 5 m will also be used as a separation distance between occurrences. Areas of occupancy are documented using the track function on the GPS, set at a 5 second increment. As always when using



the GPS, do not record any track files until the error is less than  $\pm 5$  m. Walking speeds should not exceed 4 km/hr. The following guide (Figure 3) should be used to help determine when to record a separate location for a patch or individual plant.

If occurrence boundaries have changed significantly since the last monitoring episode (e.g., most likely for annual species), patches that most closely match the location of previous occurrences will be named with that same occurrence name. Patches outside of existing occurrences, or separated from existing occurrences, will be given new names. Sometimes previously split occurrences may have amalgamated; in this case, the patch will be named with the occurrence name that it most closely matches from previous monitoring episodes.

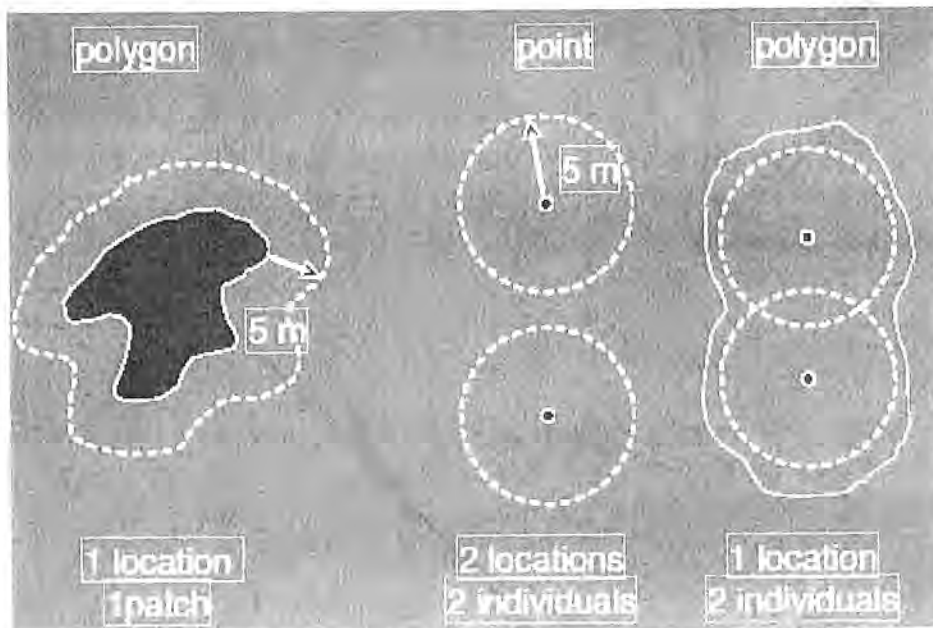


Figure 3. Differences between points and polygons, and number of locations based on distribution of plants (Native Plant Society of Saskatchewan 2007).

There are several plant species at risk that co-occur (e.g., Smooth Goosefoot, Hairy Prairie-clover, and Beaked Annual Skeletonweed) in the same habitat. During the initial survey when the crew member is placing down pin-flags, s/he should be mindful of these species and keep an eye out for them. If another target rare plant is found, it will be marked with a different color of pin-flag and population data collected for it separately.

### Determining Population Size of an Occurrence

Population estimation can be time consuming. Where possible, we will make exact counts of the number of plants present, but this is only feasible for smaller areas of occupancy. We will do stem counts as directed by the PPSARRT (e.g. counting individual stems for SMEC, or counting plant “bunches” for HPC or WS). Population estimates may be made by the RPR coordinator.

Counting Buffalograss plants is not feasible for RPR activities. Buffalograss will be monitored using area of occupancy as described above, and instead of counting plants, a cover estimate of the percent of Buffalograss in the patch will be made. Cover may be estimated visually for small occurrences. In the case of large occurrences, cover is estimated within randomly placed  $0.5 \text{ m}^2$  quadrats and an average determined.

Site photos and photos of the plants and their distribution will be taken. Photos will be labelled according to the quarter section identifier. These photos will be taken before pin-flags are removed, to better show the boundary of the area of occurrence in the photos.

## **SPECIES-SPECIFIC PROTOCOLS 2014**

### Slender Mouse-ear-cress

SMEC surveys were set up as per instructions for transects above. Once an occurrence is located on a quarter section, searches on that quarter are suspended and the crew moves onto a new quarter (after collecting data on the occurrence).

### Small-flowered Sand-verbena

SFSV-specific searches were conducted by census searching suitable habitat (shorelines, sandy areas). In 2014, we conducted joint searches for Small-flowered Sand-verbena and Smooth Goosefoot.

### Hairy Prairie-clover

HPC searches are done as census searches, that is, full swathing of an entire quarter section (see above). When plants are found, they are marked with a waypoint with the GPS (or by creating a track file around the general patch, but not much time should be spent on this). The entire quarter section is searched regardless of whether plants are found or not. No Hairy Prairie-clover searches were conducted in 2014.

### Western Spiderwort and Smooth Goosefoot

Western Spiderwort and Smooth Goosefoot surveys can be conducted concurrently by conducting polygon searches. No joint searches for Western Spiderwort and Smooth Goosefoot were conducted in 2014. Smooth Goosefoot was also a target species during Small-flowered Sand-verbena searches (see above).

Spiderwort is most easily detectable when in flower, but its flowers wilt in the day-time heat (usually by noon or so), therefore surveys for Spiderwort must be conducted starting early in the morning (walking in to the site by 5:30am). With such early start times, the day's activities will end earlier. Searches will not be conducted past 1:00 pm at the latest, since the plants' detectability decreases significantly once the flowers have closed.

### Tiny Cryptanthe

Tiny Cryptanthe surveys were set up as per instructions for transects above (similarly to Slender Mouse-ear-cress). Once an occurrence is located on a quarter section, searches on that quarter are suspended and the crew moves onto a new quarter (after collecting data on the occurrence).

### Buffalograss

Buffalograss searches were done as census searches, that is, swathing of an entire quarter section. They differ from Hairy Prairie-clover searches in that they are occupancy surveys (determining presence/absence); therefore, if an occurrence is found on the quarter section, the search is ended for that quarter. If no Buffalograss is found, however, the entire quarter section will be swathed. If plants are found, they are marked with a waypoint.

### Dwarf Woollyheads

Dwarf Woollyheads are conducted as polygon searches in suitable ephemeral wetland habitat. Due to Dwarf Woollyhead plant sizes being extremely small in 2014, searches were modified slightly and involved searching suitable patches of habitat while on hands and knees.

### Notes

- During all searches, it is important to keep an eye out for other RPR target species that have similar habitat requirements to the area being searched. Any incidental finds of these species should be marked with a waypoint and noted on data sheets.
- Whenever noxious weeds are encountered, we will ensure that we shake out or clean out anything that might have collected seeds (e.g., backpack pockets or muddy shoes) to avoid spreading the species.
- We must apply for and carry a permit in order to conduct any work in a Provincial Park. Note that it is illegal to collect any plant material from a Provincial Park without a different, special permit.
- Whenever possible, staff will visit a known location of the target species to obtain its search image and study its identifying features prior to conducting searches for that species.

**Appendix 10**

**RARE PLANT RESCUE DATA SHEETS**

















Fill out the following (as much as possible) before contacting landowner:

Landowner Name(s) (indicate primary contact)					
Organization/Ranch					
Phone Numbers (indicate which is primary)					
Home Quarter		Landscape area		RM #	
Mailing Address					
Email Address					
Quarters for Searches	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
	¼	Sec	Twp	Rge	W M RM #
Plant Species of interest					

- Have we tried contacting them before?       Yes       No
- Have we actually talked to them before?       Yes       No
- Are they program participants?       Yes       No
- (If yes) Have they signed a VHSA?       Yes       No
- Are they participants in other SOS programs?       Yes       No      Program: \_\_\_\_\_

**Front Page Summary:**

- Permission given to access land?       Yes       No
- Was a visit done?       Yes       No  
Date of Visit: \_\_\_\_\_
- (If no) Did we mail info?       Yes       No  
Date Sent: \_\_\_\_\_
- Can we send species locations to SKCDC?       Yes       No
- Can we send species locations to funders when requested? (e.g., Habitat Stewardship Program for Species at Risk)  
 Yes       No

**PHONE CALL GUIDE**

May we look for rare plants on their land? - if no, may we send information? -get mailing address

Do they want us to call with more specific dates for our searches? -cell number in case we have trouble getting a hold of them

Is there anything we should be aware of while on their land? - Livestock (bulls?), wildlife, gates, hazards

Can we stop by to drop off some information? (a visit) -if no visit, may we send out information? -get mailing address

Set-up visit date and time, ask for home quarter location

Any special directions?

Thank them for their time!

**VISIT GUIDE**

If visiting before searching, ask if they would like us to come back and let them know if we find anything, or if they want us to show them where it is.

If visiting after searches are complete, ask if they want to go out to see any plants found (check this with a phone call before visit to allow enough time for the visit)

**Discussion topics:**

- |   |   |
|---|---|
| <input type="checkbox"/> RPR program and benefits         | <input type="checkbox"/> Conservation/SAR myths |
| <input type="checkbox"/> Rare Plants and Ranchers program | <input type="checkbox"/> Mailings               |
| <input type="checkbox"/> Toolbox contents                 | <input type="checkbox"/> Privacy                |
| <input type="checkbox"/> Relevant plant species at risk   | <input type="checkbox"/> Conservation Easements |
| <input type="checkbox"/> Land practices                   | <input type="checkbox"/> VHSA                   |

If they do not sign a VHSA, **ask permission** to make the plant information we've collected available to the SKCDC.

Thank them for their time!

**CONTACT RECORDS**

<u>Type (Phone Call, Visit)</u>	<u>Date/Time</u>	<u>Staff</u>	<u>Result/Notes</u>
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**Appendix 11**

**RARE PLANT RESCUE AND STEWARDS OF SASKATCHEWAN ARTICLES AND NEWS RELEASES**



## Rare Plants and Ranchers – Enhancing habitat for rare plants

Kristen Martin, Habitat Stewardship Coordinator, Rare Plant Rescue

The prairies of Saskatchewan are home to many species of rare plants. For over ten years now, Nature Saskatchewan's Rare Plant Rescue program has worked with rural landowners to conserve prairie habitats, including grasslands and sand dunes, which support these rare plant species. Due to the stewardship and dedication of landowners and ranchers throughout southern Saskatchewan, just over 100,000 acres of rare plant habitat is being conserved under the Rare Plant Rescue program!



Since 2012, Rare Plant Rescue has teamed up with the Native Plant Society of Saskatchewan to provide stewards of rare plant habitat with an exciting opportunity to enhance the rare plant habitat on their land, to mutually benefit plant species at risk but also the ranching operation. This program, called Rare Plants and Ranchers, is specifically geared towards landowners who have one or more of the following species at risk (federally listed under the Species at Risk Act): Buffalograss, Smooth Goosefoot, Tiny Cryptanthe, Small White Lady's-slipper, Hairy Prairie-clover, Western Spiderwort, Slender Mouse-ear-cress, Dwarf Woollyheads, or Small-flowered Sand-verbena (photos and descriptions of all species can be found in our Rare Plant Pocket Guide, online at [www.naturesask.ca](http://www.naturesask.ca) or call (306) 780-9417 for a paper copy).

Participation in Rare Plants and Ranchers is totally FREE, and we do all of the work for you! Here's how it works. First, a Professional Agrologist from the Native Plant Society of Saskatchewan will visit your ranch to ask you questions about historical and current management of the land, including grazing regimes, the presence of invasive species, goals of your ranching operation, and anything else that will give context to the species at risk occurrence on your land. The Professional Agrologist then conducts range and riparian health assessments on your land, and collects data on the plant species at risk occurrences.

All of the information is then compiled into a report for you, which is yours to keep for your own information and use. The report also contains recommendations, specific to your land and ranching operation, which could be implemented to benefit the plant species at risk on your land. The best part is that cost-share funding is available to implement any of the optional recommendations that you choose. In addition to benefiting the rare plants on your land, recommendations often have added benefits for your ranching operation. For example, a recommendation to control a patch of Leafy Spurge next to an occurrence of Hairy Prairie-clover would reduce competition stress on the Hairy Prairie-clover population, but would also improve range quality for cattle grazing.

It's as easy as that! For more details or to become involved in the Rare Plants and Ranchers program, please visit our website ([www.naturesask.ca](http://www.naturesask.ca)) or contact Rare Plant Rescue at (306) 780-9417 or [rpr@naturesask.ca](mailto:rpr@naturesask.ca). We would love to hear from you!



Feature

# Rare Plant Rescue

## Conserving Southern Saskatchewan's Rare Plant Species

BY KRISTEN MARTIN,  
HABITAT STEWARDSHIP COORDINATOR,  
NATURE SASKATCHEWAN

**A**t first glance, a sand dune complex in the middle of a prairie pasture in southern Saskatchewan may seem like a barren patch on the prairie landscape. But look a little closer and you might spot the bright purple, three-petaled flower of a Western Spiderwort plant, or the long spikes of rose-coloured flowers and fuzzy leaves of Hairy Prairie-clover. These rare plants are two of eight plant species at risk, listed under the federal Species at Risk Act, that are found in Saskatchewan. In addition to many other provincially rare plant species.

In 2002, Nature Saskatchewan's Rare Plant Rescue program was created to engage rural landowners in conserving habitat for at risk or rare plant species in Saskatchewan. To participate in the program, landowners or land managers sign voluntary stewardship agreements, in which they commit to conserve (i.e., not cultivate) the rare plant habitat on their land. This type of agreement is favoured by landowners, as it is not legally binding, can be cancelled at any time, and encourages participants to keep using their land as they always have. To recognize their dedication to rare plant conservation, Rare Plant Rescue participants are provided with information and resources on species at risk, an annual species at risk calendar, a newsletter, participation certificate, and personalized gate sign for their farm or ranch. Recently, Rare Plant Rescue has also partnered with the Native Plant Society of Saskatchewan to provide interested participants with access to cost-share funding to implement management practices that are mutually beneficial to their ranching operation, as well as the plant species at risk on their land.

In addition to spreading awareness and education about plant species at risk and conservation in Saskatchewan, Rare Plant Rescue staff collect data on rare plant occurrences in southern Saskatchewan. Throughout the summer months, staff spend their days conducting searches for, and revisiting known occurrences of target plant species at risk to evaluate plant health and identify any threats that may be present. For most plant species at risk, little is known about even their basic ecology, so data collected through the Rare Plant Rescue program is very valuable and contributes to filling in knowledge gaps for these species.

While often overlooked, prairie plants are an important part of Saskatchewan's natural heritage. Having evolved under grazing pressure from bison and other native ungulates, prairie plants, including many rare species, are well-adapted for grazing by domestic livestock. Buffalo grass, for example, is a threatened species that is found only in Saskatchewan's south-east near Estevan. This low-growing grass provides good forage for livestock, and thrives with grazing. Furthermore, the life history of many of our rare plants is quite fascinating. Take the Plains Grape-fern, for example. This distinct, bright green plant consists of two parts: a sterile, leaf-like blade and a fertile blade, which bears clusters of sporangia (sacks) that look like tightly-packed bunches of grapes. This small plant can be as small as 2 cm in height (usually is under 4 cm) and spreads only a short portion of its life cycle above ground; it emerges in late April or early May, matures, releases spores, dies, and disappears by the end of June, before the heat of the Saskatchewan summer has set in.

While some plant species at risk are naturally rare (i.e., occur in small numbers) or restricted to very small areas in the province,



*Nature*  
SASKATCHEWAN

most have faced, and continue to face, threats that contribute to population declines. Historically, the conversion of native prairie to cropland or tame forage resulted in extensive loss of native prairie habitat for rare plants and other wildlife. However, many ongoing factors continue to threaten rare plant populations. These include the spread of invasive species, such as Leafy Spurge; loss of native prairie habitat due to residential development and oil and gas infrastructure; and the suppression of natural ecological processes, such as wildfires. Thus, the need for conserving rare plants and their habitats in Saskatchewan has never been greater.

After just over a decade in existence, Rare



**LEFT: Western Spiderwort**  
The deep purple flowers of Western Spiderwort open early in the morning and close by midday. | Photo Courtesy of Nature Saskatchewan

**ABOVE: Plain's Grape-fern**  
Plain's Grape-fern occurs in a variety of habitats with well-drained soils, dry or sandy prairie, sand dune complexes, and gravelly slough margins. | Photo by Sarah Vinje-Meyer



**BELOW: Field Work**  
Rare Plant Rescue staff collect data on rare plant occurrences through field research in Saskatchewan. | Photos Courtesy of Nature Saskatchewan

# Rare Plant Rescue: Adventures in the Field

By *KIRSTEN MARTIN*

*Rare Plant Rescue Coordinator, Nature Saskatchewan*

After joining Nature Saskatchewan last fall as the Rare Plant Rescue Coordinator, I was looking forward to the 2014 field season all winter long, excited about what neat plants I would see – and I wasn't disappointed! Our



PHOTO BY KRISTEN MARTIN

**A tiny Dwarf Woollyhead plant (circled in yellow) in its ephemeral wetland habitat.**

searching and monitoring efforts for our target species, eight federally-listed plant species at risk in southern Saskatchewan, took Beth Dolmage, our summer intern, and I to some of the most beautiful native prairie pastures in Saskatchewan. And it was a successful summer – in total we located over 50 new occurrences of plant species at risk. We also got the chance to visit with many of our current and potential participants, which was very enjoyable as always.

Our field season began with Slender Mouse-ear-cress (*Transberingia bursifolia* ssp. *virgata*) searches in the Burstall area at the beginning of June; a few weeks later than usual due to the cool, wet spring. Unfortunately, it did not appear to be a good year for this biennial species, as we were unsuccessful in locating any new occurrences. We did run into a few rattlesnakes though, which always livens things up! We continued our searches for Slender Mouse-ear-cress in the Lucky Lake and Birsay area for

the remainder of June, and again we did not locate any new occurrences. This trend continued with our monitoring efforts as well, with this species only being found at one of nine sites we checked where plants had been found in previous years. During our searches, we did, however, come across two new occurrences of Prairie Dunewort (*Botrychium campestre*; S1), which is one of our provincially-rare target species.

Hoping for better luck, we switched gears at the beginning of July and headed down to the Consul area in southwestern Saskatchewan to search for Dwarf Woollyheads (*Psilocarphus brevissimus* var. *brevissimus*) with staff from the Saskatchewan Conservation Data Centre. Our hopes were not dashed; we found 15 new Dwarf Woollyhead occurrences!



PHOTO BY KRISTEN MARTIN

**Close-up of a cluster of Dwarf Woollyheads plants.**

Although I knew from the name that this species was small, I was not prepared for just how small; many of the plants we found were less than 1 cm tall! This may have been due to the ephemeral wetlands, where this

species is typically found, being fairly dry this year. Usually when we conduct rare plant searches, we walk side by side in straight lines back and forth across a search area, until we have completely covered the habitat we are searching. However, some of the Dwarf Woollyheads we were seeing the first day of searching were so small that we were not even able to see them while standing up! Our search methods quickly switched to crawling around the wetland on our hands and knees, with our noses in the grass, hoping to catch a glimpse of these rare plants. Who would have thought that kneepads would be a requirement for rare plant searches? Interestingly, we noted that Dwarf Woollyheads were often found in wetlands where two other species, Marsh Cudweed (*Gnaphalium palustre*; S5?) and Rocky Mountain Pincushion-Plant (*Navarretia saximontana*; S3), were also present. Other interesting rare plants that we came across during our searches for Dwarf Woollyheads were One-spiked Oat-grass (*Danthonia unispicata*; S2), and Carolina Foxtail (*Alopecurus carolinianus*; S1).

From Consul we moved on to Eastend, where we spent some time searching for Tiny Cryptantha (*Cryptantha minima*) on the hillsides surrounding the Frenchman River. This species tends to be associated with river valleys, but so far in Saskatchewan it has only been found near the South

Saskatchewan River close to the Alberta border. Unfortunately, our searches did not reveal any new occurrences of this species. However, with plenty of suitable habitat left to search, it is possible that we might find it in future years, especially since the range of this species in the United States extends up to the Montana-Saskatchewan border.

We then headed north, up to the shores of the South Saskatchewan

River, north of Gardiner Dam. Here we monitored occurrences of two of our other target species: Small-flowered Sand-verbena (*Tripterocalyx micranthus*) and Smooth Goosefoot

**Continued on Page 7**

**Continued from Page 4**

(*Chenopodium subglabrum*). We were very pleased to find plants at 12 of 13 Small-flowered Sand-verbena occurrences that we checked, and all four Smooth Goosefoot occurrences that we checked. We also came across several new occurrences of both species on the quarter sections we were monitoring, which was a pleasant surprise. Further, on a search of an adjacent quarter section, we found an abundance of new occurrences of both of these species. One particular highlight was a huge occurrence of Smooth Goosefoot; we counted over 2,300 plants! It took us a full morning's work to count and map it out, but it is always nice to see rare plants doing so well. We also came across three new occurrences of



PHOTO BY KRISTEN MARTIN

**Small-flowered Sand-verbena's bright green leaves, small white flowers, and peach-colored winged fruits make it stand out in its sandy, shoreline habitat.**

Beaked Annual Skeletonweed (*Shimmersoseris rostrata*; S2) during our searches and monitoring.

We finished off the field season with a trip to Estevan to visit our stewards down in the southeast part of the province, and to monitor the Buffalograss occurrences on their land. For this trip we were joined by Brooke Howat, a volunteer who is pursuing Environmental Science studies at Lakeland College. Again, this was a successful trip, and it was great to see Buffalograss thriving with livestock grazing. While walking to and from sites, we also came across eight new Buffalograss occurrences. Other interesting species we came across were Big Bluestem (*Andropogon gerardii*; S4), Purple Coneflower (*Echinacea angustifolia* var. *angustifolia*; S3) and Whorled Milkweed (*Asclepias verticillata*; S1).

In addition to our rare plant finds, we were also happy to welcome five new participants into the Rare Plant Rescue program. These landowners are now part of a community of 80 Rare Plant Rescue participants. Together, their excellent stewardship is helping to conserve over 103,000 acres of habitat for rare and at risk plants in Saskatchewan. By allowing us to search for and monitor the rare plants on their land, these landowners are also helping us to understand more about the distributions and populations of Saskatchewan's rarest plant species. If you, or someone you know, has native prairie habitat and is interested in learning about how they can be a 'Steward of Saskatchewan' and join the Rare Plant Rescue program, please feel free to give me a call at (306) 780-9417 or email me at [rpr@naturesask.ca](mailto:rpr@naturesask.ca). We would love to hear from you! ❁

# Registration Form

AGM Registration deadline is Feb. 1, 2015.

Mail this form & payment by cheque to:  
Native Plant Society of Saskatchewan  
P.O. Box 21099  
Saskatoon, Sask. S7H 5N9

You can also register online  
at [www.npss.sk.ca](http://www.npss.sk.ca)

Name \_\_\_\_\_  
Organization \_\_\_\_\_  
Address \_\_\_\_\_  
City / Town \_\_\_\_\_  
Postal Code \_\_\_\_\_  
Phone (\_\_\_\_) \_\_\_\_\_  
E-mail \_\_\_\_\_

**Registration Fees:**

Friday Keynote Address and Wine and Cheese	
Saturday Meals and Presentations	
NPSS Member .....	\$50
Non NPSS Member .....	\$60
Student .....	\$40

Special dietary needs: \_\_\_\_\_

**Other:**

Individual 1-Year Membership .....	\$30
Family 1-Year Membership .....	\$45
Student 1-Year Membership .....	\$15
Non-profit Organization 1-Year Membership .....	\$100
Corporate 1-year Membership .....	\$200

TOTAL ENCLOSED \$ \_\_\_\_\_

*Please note that the member rate is applicable only to PAID members. Memberships purchased at the time of registration entitles individual to membership rates.*

For More Information Contact:  
Chet Neufeld, NPSS Executive Director  
Phone and Fax: 306-668-3940  
email: [info@npss.sk.ca](mailto:info@npss.sk.ca)  
Website: [www.npss.sk.ca](http://www.npss.sk.ca)

The 20th Annual NPSS AGM is quickly approaching. This year it is being held on Feb. 6 and 7 at the TCU Place in Saskatoon, Sask. There will be a keynote address, film screening and reception on Friday night and the AGM will be held during breakfast on Saturday morning followed by a variety of interesting presentations. If you only wish to attend the annual general meeting portion of the weekend without breakfast, there is no charge. We hope to see all of you there!

As a reminder, the board decided at a meeting in spring 2006, that resolutions that are sensitive and pertaining to complex issues, including any directive not strictly that of the NPSS or pertaining to its activities, must be submitted in writing to the NPSS Board of Directors a minimum of two weeks prior to the AGM. The resolution must include adequate background information for Board review and a clear indication of why the proposed resolution should come from the NPSS.

## A Summer of Searching for Rare Plants

Beth Dolmage, Habitat Stewardship Assistant, Nature Saskatchewan

When I tell friends or family about my job, I generally receive looks of confusion. 'You... search for plants?' they'll politely enquire; 'what are you looking for?' is what follows, with the unspoken question of, 'why?'. I understand why they would be puzzled. Plants are just sort of... there, on the landscape. Sometimes they are in the form of trees, sometimes flowers, and sometimes they are rolling by you in your car, in the seemingly endless patchwork fields stretching to the horizon. They are underfoot and overhead, and often undervalued and overlooked. Take a typical breakfast, for example. We can all forget that our coffee consists of plant material – the coffee

beans, the sugar cane, the grass or grain that fed the cow that produced the cream. The cotton shirt you put on this morning, the wooden table you may be reading this article at. It can be easy to overlook plants, and my job is to search out what most people forget about.

At Nature Saskatchewan, our Rare Plant Rescue program focuses on the rarest plants found on a rapidly disappearing landscape – our native prairie. Our prairie faces fragmentation, climate change, and encroachment by human expansion. When we search for rare plant species, we are always working with landowners and managers to conserve that plant's habitat. By voluntarily agreeing to conserve the native prairie on which the plant species is found, landowners are also providing habitat to other species, including species at risk. The cooperation of our 78 stewards is why our Rare Plant Rescue is currently preserving over 103,000 acres, or 420km<sup>2</sup> – roughly the size of Barbados! Pretty amazing, especially considering our program only focuses on 16 plant species.

When we find one of our focal species, we check to see how many plants there are, what other species occur nearby, take lots of pictures, and note the health of the population. If we are heading back to a previous occurrence to monitor how the plants are doing, we'll note the changes in population size, the area the occurrence covers, and how healthy the plants appear in comparison to our last check in. We work with partner organizations, such as the Saskatchewan Conservation Data Centre (SKCDC) and Canadian Wildlife Service to keep track of these changes. This accumulation of data helps us understand how plant populations change on a larger scale, for instance, chronologically. Our searches for a rare plant in one area this summer were greatly helped by the SKCDC's historical data – and working together, we found one of our plant species at risk again using data that was over a decade old.



Kristen Martin (left) and Beth Dolmage (right) doing a census search for Dwarf Woollyheads in southwestern Saskatchewan. Photo by Sarah Vinge-Mazer.

This summer we spent our time searching for six different plant species at risk. Our searches led us across the southern part of our province, and every field trip was memorable. We spent a week fighting off ticks (my personal record was 130 in one day), battling the rain, and wandering around sloughs in the Coteau. We were searching for Slender Mouse-ear-cress, an elusive plant in the mustard family. It can be unsatisfying looking for a biennial plant such as Slender Mouse-ear-cress, but we saw a plethora of other plant and animal species while searching, which helped. We found one (only one!) Slender Mouse-ear-cress plant while monitoring this summer, so here's hoping that next summer they are easier to find.

A 12-day stretch in southwestern Saskatchewan brought us face to flower with the smallest of the plants we looked for – Dwarf Woollyheads, a tiny green plant that we had to crawl around on hands and knees to see. This field trip was far more successful – we found nine different occurrences of it! We also had the chance to climb the steep cliffs and hills of the Frenchman River Valley and were unsuccessful in finding my personal nemesis, Tiny Cryptanthe. This hairy little

plant grows in river valleys, so to spend all day climbing up and down hills without seeing it can be frustrating. Our trip to southwestern Saskatchewan ended with a really nice evening at a Conservation Awareness Day, where we had local landowners and special guests interact at a delicious dinner.

Lunch breaks spent watching pelicans and eagles after a successful (and very hot) morning of searching are one of the many reasons why I love my job. While wandering the sedate sandy slopes of Lake Diefenbaker, we discovered more rare plants of a certain species than ever before. Smooth Goosefoot is a threatened species, and we spent one memorable day counting thousands of plants in a very small area! We also found a few occurrences of an endangered plant – Small-flowered Sand-verbena. This pretty plant loves open sand, and it was a nice change monitoring along the edge of Lake Diefenbaker. We found 11 new locations and monitored 14 previously found occurrences of this endangered species.

Our last week of field work was spent in Estevan, where we monitored Buffalograss, a threatened grass species found only in the very southeastern part of our province. This too was a very successful trip. We monitored over 35 known occurrences of the grass, and happened upon nine new occurrences, not to mention several other provincially rare plants. We found the wildlife pretty exciting too – turtles, frogs, nighthawks, and one memorable scare from a skunk in our campsite!

At the end of a long day of searching, one of our favourite things to do, besides going for ice cream (Birsay, by the way, has one of the most generous ice cream portions in the province), is to visit our stewards. Whether it was chatting about family trees in the Mendham area, learning the merits of moving a Mennonite-built house across provinces, posing for pictures with new gate signs for our program participants, or discussing species at risk and Rare Plant Rescue, our visits are fond memories, and we want to send a big thank you to all of our generous hosts. These landowners are contributing voluntarily to preserving some of the most delicate plants and vulnerable areas of land in Saskatchewan.



The only Slender-mouse-ear Cress (*Transberingia bursifolia*) plant we saw this summer! Photo by Beth Dolmage.

Our work would be impossible without our Rare Plant Rescue participants, and it would also be impossible without help from our staff members. While the two of us (Kristen Martin and I) worked side by side the whole summer, we had several great staff members and volunteers help us out. Marika Cameron and Emily Putz joined us while we searched the Coteau, and Brooke Hudson volunteered her time to monitor Buffalograss with us. It was wonderful to have new people work with us, and to hear about and learn from their previous field experiences. It was also nice to teach them about some of the plant species at risk we search for. A huge thank you goes out to these hard working ladies!

Plants exist in every aspect of our lives, and here in Saskatchewan, our ability to grow exceptional crops is arguably one of the most important parts of our livelihood. We should also take pride in our small stretches of native prairie that remain home to our Prairie Lily, Antelope, and Burrowing Owls. The balance between our ability to produce food and fuel, and the urge to preserve native prairie is one sided at the moment, but this flux in our prairie landscape relies on our stewards to become the pivot in these scales. We could not preserve these precious areas of land without our voluntary participants, and it is due to them that we still have a chance to swing those scales.

I hope the next time you look through your kitchen, closet, backyard, local green space, or garden you remember that plants are both vital to our everyday lives, and the foundation to our prairies. If you have a question about a plant you've found, or if you want to learn more about what we do here at Rare Plant Rescue, give us a call. You can reach us at 1-306-780-9417, or by email at [rpr@naturesask.ca](mailto:rpr@naturesask.ca). We'll be here, sipping our coffee, talking about plants.

## Wolseley Nature Conservation Society Nature Trail

Beth Dolmage, Habitat Stewardship Assistant, Nature Saskatchewan



Beth Dolmage (bottom left) and Kristen Martin (top right, second in) with the Wolseley Natural Conservation Society and Dr. Isman Elementary School Grade 6 students at the trail welcome sign. Photo by Mrs. Clarke.

The Nature Saskatchewan Rare Plant Rescue (RPR) team had a chance to head out to Wolseley recently, on invitation from the town's Nature Conservation Society. Richard Solberg invited Kristen Martin and Beth Dolmage out to help identify the plants on and around the nature trail he recently created. The Wolseley Nature trail begins on the east side of town, near the Co-op. Interpretive signs mark the trail, and it offers lovely views of the wetland and prairie on the edge of town.

The Grade 6 class from Dr. Isman Elementary School in Wolseley came out for the tour as well, and after admiring the hand painted Welcome sign, the RPR crew and company started out. On the tour, the RPR team pointed out local invasive species, as well as wetland plants, edibles, poisonous plants, and flowers. There was also a sighting of the elusive American Bittern – a very interesting heron-like bird with a unique call. Along this tour, the Grade 6 class collected various seeds and fruits, which were then discussed and dissected back in the classroom. We hope that the Grade 6 class had as much fun learning from us as we did from them! The RPR crew would like to thank the Wolseley Nature Conservation Society for inviting us out, and to congratulate them on their trail initiative.

## WOLSELEY NEWS

### Nature Saskatchewan Staffers Visit Local Nature Trail

*By Stephen Scriver*



*Beth Dolmage of Nature Saskatchewan enlightens Grade Six students at Dr. Isman School about local plants as colleague Kristen Martin looks on.*

Two scientists from Nature Saskatchewan visited Wolseley on Thursday at the invitation of the Wolseley Nature Conservation Society (WNCS) to inventory local flora and fauna and to share their knowledge with society members and students from Dr. Isman School.

\ Kristen Martin, Habitat Stewardship Coordinator and Beth Dolmage, a Habitat Stewardship intern, centered their visit on the nature trail at the east end of town, primarily the work of WNCS Chair Richard Solberg. They led a number of WNCS members and Mrs. C. Clark's Grade Six class along the trail, pointing out interesting local plants and birds, adding many details. A highlight was the sighting of a bittern, in their words, "a rare occurrence."

Mses. Martin and Dolmage then returned to Dr. Isman School to look at plant samples that the students had collected. Pertinent information about seed migration, edibility and the inner structure of the plants made for a wonderful hands-on experience for the children.

At lunch following the tour, Kristen and Beth expressed their delight at the state of the nature trail, including the display of paintings and information that local art students had produced. There were discussions about future projects for the WNCS and encouragement for local members to take part in provincial programs.



# **NEWS RELEASE**

**from Nature Saskatchewan**

*Humanity in Harmony with Nature*

*Nature*  
SASKATCHEWAN

***For Immediate Release***

**Nature Saskatchewan gears up for the summer season's "Search and Rescue" - for rare and endangered plants.**

**REGINA, SK - June 16.** – While some pull on the gardening gloves as warmer weather arrives, Nature Saskatchewan's Rare Plant Rescue team lace up the hiking boots.

In its thirteenth year of operation, the Rare Plant Rescue crew is ready to get back in the field. Every summer, a team of dedicated staff head out to some of Saskatchewan's dwindling native prairie patches, and search for endangered, threatened, and rare plants. Many of these species are found in river valleys and sandy areas, where threats such as habitat loss and degradation can affect these uncommon species.

"This summer, we are focusing our search efforts on three plant species: Slender Mouse-ear-cress, Tiny Cryptanthe, and Dwarf Woollyheads. We are hoping to find some new occurrences, raise awareness about these rare species, and to enroll more landowners into our program" says Kristen Martin, the Habitat Stewardship Coordinator for Rare Plant Rescue. As she explains, "as part of Nature Saskatchewan, a non-profit, non-government organization, Rare Plant Rescue works with willing landowners to search for and monitor rare plant species on their land. We work together with landowners to create voluntary stewardship agreements, through which landowners preserve valuable native prairie habitat for plants, and other wildlife, all while continuing to use their land exactly as they always have. Currently, we have 75 dedicated stewards who, together, are helping to preserve over 101,000 acres (40,873 hectares) of prairie habitat!"

While searching for rare plants may sound like a walk in the park, data collected by the Rare Plant Rescue team is important for increasing our knowledge about the population size and distribution of rare plant species throughout Saskatchewan. This valuable information helps to inform conservation planning. In part to data collected by the Rare Plant Rescue team in the past, two federally listed plant species at risk, Hairy Prairie-clover and Buffalograss, were recently recommended by the Committee on the Status of Endangered Wildlife in Canada to be downlisted from 'threatened' to 'special concern', a lower risk category. As a result, time and resources can be focused on other plant and wildlife species that face a greater risk of becoming endangered or extinct. "It's nice to hear positive news about species at risk, especially plants" says Kristen, "News like this helps us to reach out to more landowners, and really shows how landowners continue to play a key role in preserving habitat for species at risk through their good stewardship of the land."

Rare Plant Rescue aims to conserve rare plant habitat by building respectful relationships with landowners with rare plants or rare plant habitat on their land, and by providing them with information they might need to make informed stewardship decisions. Private information is never shared without landowner permission. For more information about

the Rare Plant Rescue program, or to report a rare plant occurrence on your property, please contact Rare Plant Rescue at 1-800-667-4668. Reporting plant species at risk occurrences helps increase knowledge about their distribution and population size, facilitating conservation efforts.

**For further information on this plant or other species at risk, please contact Nature Saskatchewan:**

Kristen Martin: (306) 780-9417 (office) or (306) 581-6819 (cell)  
email: [rpr@naturesask.ca](mailto:rpr@naturesask.ca)  
Habitat Stewardship Coordinator

Nature Saskatchewan  
206 - 1860 Lorne Street, Regina, SK S4P 2L7

Phone: (306) 780-9273 or 1-800-667-4668 (SK and AB only)  
Fax: (306) 780-9263; Email: [info@naturesask.ca](mailto:info@naturesask.ca)  
Visit us at [www.naturesask.ca](http://www.naturesask.ca)

Rare Plant Rescue is a Nature Saskatchewan voluntary stewardship program funded through the Saskatchewan Environment's Fish & Wildlife Development Fund, SaskPower, Environment Canada – Science Horizons Youth Internship Program, Government of Canada – Canada Summer Jobs, Government of Saskatchewan – Student Summer Works Program, Prairie Conservation and Endangered Species Conference – Young Professional Stewardship Grant, Elsa Wild Animal Appeal of Canada, TD Friends of the Environment Foundation, Sasktel, and Nature Saskatchewan member donations.

Nature Saskatchewan is a charitable conservation and cultural organization of naturalists dedicated to protecting and promoting nature, its diversity, and the processes that sustain it. Our supporters include over 850 individual members and 14 local naturalist groups. Our vision is "Humanity in Harmony with Nature".



# **NEWS RELEASE**



**from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

**For Immediate Release**

## **Burrowing Owls: Operation Raise a Family**

**Regina, SK - May 26, 2014** –The Burrowing Owl, one of Saskatchewan’s best known species at risk, has returned to Saskatchewan after spending the winter in Mexico and Texas. From mid-May until mid-June, these endangered owls are in the process of finding a mate, building a nest, laying and incubating their eggs.

Despite their name, Burrowing Owls do not dig out their nests by themselves. Instead, they use abandoned burrows that have been excavated by ground squirrels, badgers, or other burrowing mammals. Each spring, female Burrowing Owls lay 6-12 eggs. Because there are less than 800 pairs nesting throughout Canada, the success of each nest is important to the survival and recovery of the burrowing owl.

To ensure the success of nesting Burrowing Owls, it is important to minimize human activity around nest sites as much as possible. Cattle grazing, however, is not a disturbance of concern for these owls. Kaytlyn Burrows, Habitat Stewardship Coordinator, explains: “The shorter grass in grazed pastures helps these owls to sight potential predators. Additionally, Burrowing Owls often use the manure to absorb excess moisture, regulate burrow temperature, attract insects, and hide the owl’s scent from predators.”

If you discover a pair of Burrowing Owls nesting in your pasture, do not fear! There are many advantages to having owls on your land, especially the free pest control. “Burrowing Owls eat huge numbers of small mammals such as mice and voles, and the young feed primarily on grasshoppers,” says Burrows, “In one summer a family of Burrowing Owls can consume 7,000 grasshoppers and 1,800 rodents.”

Burrowing Owls are identifiable by their small size (19-25 cm tall), and light and dark brown mottled plumage with white spots. Burrowing owls have very long legs, which can give them the appearance of walking on stilts. They have a round head, with large yellow eyes, and they do not have ear tufts. During the nesting season, male burrowing owls can often be seen standing on mounds of dirt next to their burrows, or on nearby fence posts while the female incubates her eggs.

Nature Saskatchewan’s Operation Burrowing Owl works with landowners to promote the protection and enhancement of Burrowing Owl habitat, and monitors Burrowing Owl populations. If you spot a burrowing owl, please let us know by calling Operation

Burrowing Owl at our **toll-free Hoot Line at 1-800-667-HOOT (4668)**. Information is not shared without permission.

- 30 -

**For further information please contact Nature Saskatchewan :**

Kaytlyn Burrows (306) 780-9833, email [obo@naturesask.ca](mailto:obo@naturesask.ca)  
Habitat Stewardship Coordinator

Jordan Ignatiuk (306) 780-9273, email [info@naturesask.ca](mailto:info@naturesask.ca)  
Executive Director

Nature Saskatchewan  
206, 1860 Lorne Street  
Regina, SK S4P 2L7

Phone: (306) 780-9273 or 1-800-667-4668 (SK and AB only)  
Fax: (306) 780-9263; Email: [info@naturesask.ca](mailto:info@naturesask.ca)  
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Nature Saskatchewan receives funding from



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Burrowing Owl

Photo courtesy Shelly Fisher

grass in grazed pastures helps these owls to sight potential predators. Additionally, Burrowing Owls often use the manure to absorb excess moisture, regulate burrow temperature, attract insects, and hide the owl's scent from predators."

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### Give a Hoot about Burrowing Owls

Written by Juanita Turtiano on Wednesday, 28 May 2014

*(Photo: Shelly Fishard)*

After a long winter, many birds are slowly migrating back to their summer nesting grounds. The Burrowing Owl is one of those birds returning to Saskatchewan after spending the winter in Texas and Mexico, and Nature Saskatchewan is looking for your help if you see the endangered birds.

"We ask that the public or any rural land owners will call in any sighting that they do see and that information is used in population monitoring for the burrowing owl," says Kaytlyn Burrows the Habitat Stewardship Coordinator for Nature Saskatchewan.

Those land owners will also be contacted to participate in Operation Burrowing Owl that is a stewardship program that they have been running since 1987.

"It is important for us to get the word out there about the burrowing owls so that people can report them to us," said Burrows. "We can then get a better idea of where their population numbers do stand, with the majority of the owls being in Southern Saskatchewan and Alberta. They are a little bit larger than an American robin, something characteristic about them is they have the long featherless legs, look like they are standing on stilts, they got those big yellow eyes and they look like they have got big white bushy eyebrows."

If you spot a burrowing owl, the best way to get a hold of someone is to contact Nature Saskatchewan through their "Hoot Line" at 1-800-667-HOOT.

Burrows also wants people to be assured that any information shared about the location of a burrowing owl is kept confidential.

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## Burrowing owls: operation raise a family

PHOTOGRAPH BY NATALIE BASKIN / NEWS-OPTIMIST



Burrowing owls provide free pest control on pasture land. Photograph By photo submitted

The burrowing owl, one of Saskatchewan's best-known species at risk, has returned to Saskatchewan after spending the winter in Mexico and Texas. From mid-May until mid-June, these endangered owls are in the process of finding a mate, building a nest, laying and incubating their eggs.

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### This Week's Flyers



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HOVER FOR FLYER

### march 9 2015 POLL

Since the al-Shabab terror group posted a video online encouraging followers to attack a list of shopping centres around the world, including West Edmonton Mall, have you decided not to visit?

- I don't want to live in fear. I will visit.
- Not taking chances. I won't be visiting.
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- I don't usually visit, but I might, just to make a point.

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# **NEWS RELEASE**



**from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

**For Immediate Release**

## **Piping Plovers: Plovers in a dangerous time**

**Regina, SK - May 30, 2014** – The arrival of spring often marks the return of many Saskatchewan residents to the lake. While you are out and about, keep a sharp eye out for the nest of another seasonal resident, the endangered Piping Plover. After wintering along the southern Atlantic Coast and the Gulf of Mexico, the Piping Plover returns to Saskatchewan to mate and raise its young.

In late May, this shorebird lays 4 eggs in a shallow rock nest on the shorelines of many Saskatchewan lakes, including Lake Diefenbaker, Old Wives Lake, Chaplin Lake, Quill Lakes, and numerous small basins. The eggs are speckled, and blend in with the gravel and sand. "Piping Plover eggs are very difficult to see," explains Ashley Fortney, Plovers on Shore Coordinator, "This makes them very vulnerable to trampling by people walking along the shoreline."

The Piping Plover was designated as an endangered species in 1985 due to low population numbers. The low numbers may be attributed to the fact that the Piping Plover faces many threats. "All-terrain vehicles are a big one," states Fortney, "And deep hoof prints from cattle can trap the newly hatched young, preventing them from reaching water, effectively killing them."

About two-thirds of the Canadian population breeds in Saskatchewan. The Plovers on Shore program was initiated by Nature Saskatchewan in 2008 to increase awareness about the Piping Plover, conserve shoreline and wetland habitat for plovers and other prairie species, and to promote beneficial management practices and habitat



enhancement projects in Piping Plover breeding areas. Thanks to volunteers, the International Piping Plover censuses (held every 5 years since 1991), coordinated in Saskatchewan by Nature Saskatchewan, have helped to identify areas important to Piping Plovers and have indicated a need for a voluntary stewardship program with rural landowners for the Piping Plover.

You can help Nature Saskatchewan monitor Piping Plover populations by reporting sightings of Piping Plovers or other species at risk to our toll free Hoot Line at: **1-800-667-HOOT (4668)**.

- 30 -

**For further information please contact Nature Saskatchewan :**

Ashley Fortney (306) 529-9980, email [outreach@naturesask.ca](mailto:outreach@naturesask.ca)  
Habitat Stewardship Coordinator.

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Nature Saskatchewan receives funding from



Printed in:

Swift Current's *The Southwest Booster* (July 10, 2014)

## Piping Plovers chicks hatching on Saskatchewan beaches

SUBMITTED

July is a great time for bird-watchers on the Canadian prairies to catch a glimpse of an endangered Piping Plover chick. Piping Plovers are among many bird species that migrate north to our province to breed and raise young over the summer months, but they have some very interesting qualities. "Piping Plovers have great dads," says Ashley Fortney, Habitat Stewardship Coordinator with Nature Saskatchewan. "They are very vigilant, keeping watch

over the eggs in the nest and even spending a lot of their time incubating the eggs themselves." For many other bird species it is the female alone that incubates the eggs. Fortney adds that "Piping Plover chicks are also fairly unique in that they leave the nest within hours of hatching and are able to feed themselves right away."

In Saskatchewan, Piping Plovers nest along the gravelly, sandy banks of Lake Diefenbaker, Quill Lakes, Chaplin Lake, and Old Wives Lake, among other basins.

# **NEWS RELEASE**



**from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

For Immediate Release

## **Impaling Prey on Barbed Wire: A “Shriking” statement!**

**Regina, SK - May 30, 2014** – While walking in the prairies this summer, be sure to keep an eye on the fence posts and bushes for one of Saskatchewan’s most unique and threatened song birds, the Loggerhead Shrike. “The Loggerhead Shrike is a song bird that likes to think it’s a hawk,” jokes Ashley Fortney, Coordinator of Shrubs for Shrikes, “It will attack and carry food that weighs more than the shrike itself, but it doesn’t have the strong talons like a hawk does so it impales its prey on barbed wire or thorns.”

In early spring the Loggerhead Shrike returns from its wintering grounds in Mexico and Texas to raise a family. The female Loggerhead Shrike usually lays her eggs at the end of May. Loggerhead Shrikes are a great form of pest control, especially once the eggs hatch. In one study, an adult brought 240 grasshoppers to the nest in a period of one hour! In addition to grasshoppers, Loggerhead Shrikes will eat small vertebrates, such as small rodents, reptiles, and amphibians. The best time to see this threatened species is late June to early July when the adults are busy foraging for food for their young.

The Loggerhead Shrike is slightly smaller than a robin, and is identifiable by its grey back and black mask across its face that stretches through and past its eyes. It has a hooked black beak, and white wing patches on its black wings, which are easily visible when in flight. Loggerhead Shrikes can be found nesting in thorny shrubs such as hawthorn or buffaloberry, shelterbelts, occupied or abandoned farmsteads, golf courses, and cemeteries.

Nature Saskatchewan's Shrubs for Shrikes program was launched in 2003 to promote the conservation of prairie habitat for shrikes and other prairie species. The Loggerhead Shrike population numbers have been declining since 1960, a reason that the species has been listed as threatened. Shrubs for Shrikes asks for your help in monitoring this unique song bird. If you see a Loggerhead Shrike, please let us know by calling our toll-free number **1-800-667-HOOT (4668)**.

- 30 -

**For further information please contact Nature Saskatchewan :**

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Habitat Stewardship Coordinator

Jordan Ignatiuk (306) 780-9293, email [jignatiuk@naturesask.ca](mailto:jignatiuk@naturesask.ca)  
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# **NEWS RELEASE**



**from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

**For Immediate Release**

## **Piping Plovers Chicks Hatching on Saskatchewan Beaches**

**Regina, SK – July 7, 2014** – July is a great time for birdwatchers on the Canadian prairies to catch a glimpse of an endangered Piping Plover chick. Piping Plovers are among many bird species that migrate north to our province to breed and raise young over the summer months, but they have some very interesting qualities. "Piping Plovers have great dads," says Ashley Fortney, Habitat Stewardship Coordinator with Nature Saskatchewan. "They are very vigilant, keeping watch over the eggs in the nest and even spending a lot of their time incubating the eggs themselves." For many other bird species it is the female, alone, that incubates the eggs. Fortney adds that "Piping Plover chicks are also fairly unique in that they leave the nest within hours of hatching and are able to feed themselves right away".

In Saskatchewan, Piping Plovers nest along the gravelly, sandy banks of Lake Diefenbaker, Quill Lakes, Chaplin Lake, and Old Wives Lake, among other basins. "Because they nest right on the beach they are very susceptible to fluctuations in water levels, and can be negatively affected by even minor floods. If their first nest fails they can try again but a second nesting attempt is often unsuccessful," says Fortney.

The chicks spend the month of July growing very quickly and learning to fly so they can begin their migration back to their wintering grounds, around the Gulf of Mexico and the Atlantic coast, in August. If you are on the prowl to spot a Piping Plover you had better go soon because these birds will be gone in a few short weeks.

Plovers on Shore is one of the Stewards of Saskatchewan programs at Nature Saskatchewan, a non-profit, non-governmental organization that encourages voluntary land conservation for

Species at Risk. To learn more about the Piping Plover or the Plovers on Shore program, or to report a Species at Risk sighting, please contact Nature Saskatchewan at **1-800-667-4668**.

- 30 -

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# **NEWS RELEASE**



**from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

**For Immediate Release**

## **Young Butcherbirds are Learning the Trade**

**Regina, SK – July 21, 2014** – The Loggerhead Shrike, a.k.a. “butcherbird” is a species of songbird that is native to the Saskatchewan prairies. Their name says it all - ‘Loggerhead’ because of their relatively large heads, ‘shrike’ because their call is more of a shriek, and ‘butcherbird’ because they impale and hang their prey on barbed wire fences, thorny shrubs, and trees. Similar to other birds of prey, shrikes have hooked bills; however, they lack the strong talons that most birds of prey possess so they must impale their prey to secure it during feeding. The males even use their impaled prey to attract mates. “What girl doesn’t love the sight of dead mice and snakes adorning the fence of their prospective home?” jokes Ashley Fortney, Habitat Stewardship Coordinator with Nature Saskatchewan’s Shrubs for Shrikes program. “It’s really a way for the males to show that they are good hunters and would provide well for a family.” The shrike’s prey items include beetles, grasshoppers, garter snakes, mice, voles, frogs, and even other smaller songbirds.

These birds migrate to Saskatchewan in the spring and are gone back to Texas and Mexico in the fall. Loggerhead Shrike young are nearly as big as their parents now, having grown up to 15 times their size in just two weeks. Mid- to late-July is when the chicks start leaving the nest and learning to fly. “Right around now is when the chicks start learning to hunt and impale prey” says Fortney, “it is really cute to see them trying to impale prey but not quite getting it right. Although young shrikes look just like their parents you can differentiate them because their tails are shorter and they appear fluffier. Also, they tend to hang out in groups of 4 to 7 which is quite a sight to see.”

Loggerhead Shrikes are slightly smaller than the American Robin with a black mask that extends from the bill past the eyes. They have a grey back with white underparts, black wings and a black tail with characteristic white stripes on the wings and the edges of the tail, which are easily seen when birds are in flight. Nature Saskatchewan is asking anyone who sees a Loggerhead Shrike or other Species at Risk to please report the sighting to their toll-free number **1-800-667-4668 (HOOT)**. By reporting Loggerhead Shrikes, you provide valuable information about population size and distribution for this threatened bird. Information will not be shared without a landowner's permission.

- 30 -

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**Printed in:**

Yorkton's *The News Review* (July 28, 2014)

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## Young Butcherbirds learning the trade



JULY 28, 2014

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Similar to other birds of prey, shrikes have hooked bills; however, they lack the strong talons that most birds of prey possess so they must impale their prey to secure it during feeding. The males even use their impaled prey to attract mates.

"What girl doesn't love the sight of dead mice and snakes adorning the fence of their prospective home?" jokes Ashley Fortney, Habitat Stewardship Coordinator with Nature Saskatchewan's Shrubs for Shrikes program.

"It's really a way for the males to show that they are good hunters and would provide well for a family."

The shrike's prey items include beetles, grasshoppers, garter snakes, mice, voles, frogs, and even other smaller songbirds.

These birds migrate to Saskatchewan in the spring and are gone back to Texas and Mexico in the fall. Loggerhead Shrike young are nearly as big as their parents now, having grown up to 15 times their size in just two weeks. Mid- to late-July is when the chicks start leaving the nest and learning to fly.

"Right around now is when the chicks start learning to hunt and impale prey" says Fortney, "it is really cute to see them trying to impale prey but not quite getting it right. Although young shrikes look just like their parents you can differentiate them because their tails are shorter and they appear fluffier. Also, they tend to hang out in groups of four to seven which is quite a sight to see."

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Nature Saskatchewan is asking anyone who sees a Loggerhead Shrike or other Species at Risk to please report the sighting to their toll-free number 1-800-667-4668 (HOOT). By reporting Loggerhead Shrikes, you provide valuable information about population size and distribution for this threatened bird. Information will not be shared without a landowner's permission.

BIRD | LOGGERHEAD SHRIKE

# Songbird sends critters scrambling for cover

**Loggerhead Shrike** | Wildlife preservation group seeks population data to plan habitat conservation programs

BY TARYN RIEMER  
SASKATOON NEWSROOM

A small animal hanging on a barbed wire fence might seem like a gruesome accident, or strange foreshadowing from a macabre horror movie.

But the tiny animals and insects were likely impaled there by a small songbird called the loggerhead shrike.

The shrike, which is smaller than a robin, hunts like a hawk, even though it lacks the strong talons.

Their diet includes grasshoppers, snakes, frogs, mice and other songbirds.

Martin Stoffle, bird watcher and part-time field assistant in biology at the University of Saskatchewan in Saskatoon, said the shrikes are good for controlling pests.

The shrike can grow up to 15 times its birth weight in just two weeks. The Prairie Loggerhead Shrike was classified as threatened in 2005 under the Species At Risk Act. The Eastern Loggerhead Shrike is classified as endangered.

Ashley Fortney, the Habitats Stewardship Co-ordinator for the Shrubs for Shrikes program, said they monitor the population by sending out census cards to participants.

"We have a program where we work closely with rural landowners and the goal is obviously to conserve habitat for the loggerhead shrikes," said Fortney.

Andrew Didiuk, wildlife biologist with the Species At Risk unit, said recovery strategies have been created to see where the habitats stewardship program should be headed. It includes conservation measures and action plans for different provinces.

Didiuk said they have a good idea of the species' needs for habitat but because the birds are nesting in



The Species At Risk Act lists the Prairie Loggerhead Shrike as threatened while the Eastern Loggerhead Shrike is endangered. | TARYN RIEMER PHOTO



MARTIN STOFFLE  
BIRD WATCHER

abandoned farmyards and shelterbelts, he is worried they are not reproducing successfully enough to expand the population.

Elaine Williams, executive director for Wildlife Preservation Canada, said her organization is working on a captive breeding program to try and increase the eastern population.

Didiuk and Williams agree the birds' winter migration may be causing the decline in numbers.

Williams said researchers have been working on geo-locators for the bird's back. When one Eastern Shrike with a locator returned for the first time this year, they found it

wintered in Illinois.

"Illinois happens to be a state where, if you have a map where you show anything from white to dark red and the darker being very intensive use, Illinois happens to be a state that [neonicotinoid use] happens a lot in," she said.

Didiuk said they are still trying to figure out where the Prairie Loggerhead Shrike spends winter by using a technique called stable isotopes in the feathers of the shrikes.

He believes they may be wintering in places like Mexico and the Caribbean.

"That's an important first step, to find out where they're going, before you can consider what kind of conservation issues might be occurring," said Didiuk.

If a shrike is seen, the public can call Wildlife Preservation Canada's toll-free number 800-956-6608 or Nature Saskatchewan's Hootline 800-667-4668.

# **NEWS RELEASE**



## **from Nature Saskatchewan**

*The Voice of Nature for Saskatchewan*

**For Immediate Release**

### **Why did the Burrowing Owl Cross the Road?**

**Regina, SK – July 28, 2014** – Late July marks the end of a busy season for the Burrowing Owl. After weeks of being fed by their parents, juvenile owls are now starting to leave the nest and forage for themselves. This is an especially good time for travellers in rural Saskatchewan to spot Burrowing Owls, but it can also be a dangerous time for inexperienced Burrowing Owls. Young owls tend to forage in roadside ditches, looking for small invertebrates and rodents. "At dusk the road surface tends to be warmer than surrounding grasslands, attracting many small insects and rodents," explains Kaytlyn Burrows, coordinator of Operation Burrowing Owl, "As a result young owls are also attracted to the road and ditch when they begin searching for prey."

Many young Burrowing Owls are killed by motorists each year whilst foraging along the road. The Burrowing Owl population has been steadily declining making the survival of each juvenile owl critical for the survival and growth of the population. "Motorists can help reduce the risk of owl-vehicle collisions by slowing down near known or potential nest sites, and being on the lookout for low flying owls", says Burrows. Slowing down will also increase your chances of spotting this endangered bird!

Burrowing Owls are about 9 inches tall, with mottled brown and white feathers, bushy white 'eyebrows', and long featherless legs. They are often found nesting in native prairie that has been well grazed, as the short grass allows them to spot predators. Burrowing Owls nest in burrows excavated by badgers, ground squirrels, or other burrowing mammals, and may be seen standing on their burrow, sitting on nearby fence posts, or foraging in the ditches.

Since 1987 Nature Saskatchewan's Operation Burrowing Owl has worked with landowners to protect and enhance Burrowing Owl habitat. In addition, the program relies on the participation of landowners to help monitor the Burrowing Owl population. Currently, there are nearly 400 landowners across Saskatchewan participating in Operation Burrowing Owl. If you spot a Burrowing Owl, please let us know by calling Operation Burrowing Owl at our **toll-free Hoot Line at 1-800-667-HOOT (4668)**. Landowner information is not shared without permission.

**For further information please contact Nature Saskatchewan :**

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Habitat Stewardship Coordinator

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Printed in:

Moose Jaw Times Herald (Online) (July 29, 2014)



The Moose Jaw Times Herald News

## Burrowing owl's population on the decline

July 29, 2014

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The population of Burrowing Owls are on a steady decline in the province, and Nature Saskatchewan is encouraging people to call their Hoot Line, if one is spotted.



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Mickey Djuric Burrowing Owl: Burrowing Owl by Mickey Djuric, July 29, 2014. Owl is on the decline in the province. Photo: Mickey Djuric, Mickey Djuric

The end of July is a time where Burrowing Owls start to leave the nest and forage for themselves, however, this can be a dangerous time for inexperienced owls.

They tend to forage in roadside ditches looking for rodents and insects and as a result many are killed by motorists each year.

"The important thing is to keep your eyes out for them. Watch out on the roads and call in for sightings," said Ashley Fortney, habitat stewardship coordinator at Nature Saskatchewan.

The population of the owls have been declining in recent years mainly due to habitat loss and road mortality.

"If you talk to land owners, a lot of them will say they used to look out in the prairies, and you couldn't miss seeing one of those ground owls," said Fortney.

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"Now they're really rare. It's really sad."

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"If you talk to land owners, a lot of them will say they used to look out in the prairies, and you couldn't miss seeing one of those ground owls," said Fortney.

"Now they're really rare. It's really sad."

Other advice Nature Saskatchewan offers is having people try to maintain the prairies. Currently there is less than 25 per cent of native prairies remaining.

"Basically for rural land owners, agricultural producers, if we can keep our remaining prairie patches then that's one way to keep their habitat around, and as a way to keep them around."

Burrowing Owls are often found nesting in native prairies that has been well grazed to allow them to spot predators.

If anyone spots a Burrowing Owl, you can let Nature Saskatchewan know by calling their toll-free Hoot Line at 1-800-667-HOOT (4668).

Mickey Djuric can be reached at 306-691-1263 or @Mickey\_MJTimes.

Printed in:

Coronach's *Triangle News* (Online) (August 1, 2014)

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## Burrowing owl population on the decline

Staff - The Coronach Triangle News  
published on August 01, 2014

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TC Media photo

Burrowing owls like the one held by interpreter, Lori Johnson, are on the decline in the province.

MOOSE JAW (TC Media) — The population of Burrowing Owls are on a steady decline in the province, and Nature Saskatchewan is encouraging people to call their Hoot Line, if one is spotted.

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— Times-Herald

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Prince Albert's Daily Herald (Online) (August 1, 2014)



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The Prince Albert Daily Herald - News - Burrowing

## Burrowing owl population on the decline

Staff - The Coronach Triangle News  
Published on August 1, 2014

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TC Media photo

Burrowing owls like the one held by managers. Left to right are on the decline in the province

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— Times Herald

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Printed in:

Yorkton's *Yorkton This Week* (Online) (August 6, 2014)

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## Juveniles are just learning to fly

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August 6, 2014



Late July marks the end of a busy season for the Burrowing Owl. After weeks of being fed by their parents, juvenile owls are now starting to leave the nest and forage for themselves. This is an especially good time for travellers in rural

Saskatchewan to spot Burrowing Owls, but it can also be a dangerous time for inexperienced Burrowing Owls. Young owls tend to forage in roadside ditches, looking for small invertebrates and rodents. "At dusk the road surface tends to be warmer than surrounding grasslands, attracting many small insects and rodents," explains Kaytlyn Burrows, coordinator of Operation Burrowing Owl. "As a result young owls are also attracted to the road and ditch when they begin searching for prey."



Many young Burrowing Owls are killed by motorists each year whilst foraging along the road. The Burrowing Owl population has been steadily declining making the survival of each juvenile owl critical for the survival and growth of the population. "Motorists can help reduce the risk of owl-vehicle collisions by slowing down near known or potential nest sites, and being on the lookout for low flying owls", says Burrows. Slowing down will also increase your chances of spotting this endangered bird!

Burrowing Owls are about 9 inches tall, with mottled brown and white feathers, bushy white 'eyebrows', and long featherless legs. They are often found nesting in native prairie that has been well grazed, as the short grass allows them to spot predators. Burrowing Owls nest in burrows excavated by badgers, ground squirrels, or other burrowing mammals, and may be seen standing on their burrow, sitting on nearby fence posts, or foraging in the ditches.

Since 1987 Nature Saskatchewan's Operation Burrowing Owl has worked with landowners to protect and enhance Burrowing Owl habitat. In addition, the program relies on the participation of landowners to help monitor the Burrowing Owl population.

Currently, there are nearly 400 landowners across Saskatchewan participating in Operation Burrowing Owl.

If you spot a Burrowing Owl, please let us know by calling Operation Burrowing Owl at our toll-free Hoot Line at 1-800-667-HOOT (4668). Landowner information is not shared without permission.



**Printed in:**

*Nature Views* (Summer 2014)

## **Arts CARES Students Volunteer at Nature Saskatchewan**

Brody Dermody, Arts CARES Student, Nature Saskatchewan

I am a third-year student majoring in Psychology at the University of Regina, and through the Arts CARES program I was given a great opportunity to volunteer at Nature Saskatchewan over Reading Week from February 18-21, 2014. The program itself allows people, more specifically students, to give back to their own community, by helping out the chosen organization in the areas they need. Basically, Arts CARES is a four-day program that allows students enrolled in the Faculty of Arts to volunteer at community-based organizations, with the end goal being not only to provide services to the organizations involved, but also to give the students a chance to gain valuable experience and develop new skills.



ARTS Cares Student Volunteers (from left to right) Nengi Allison, Rossanah Ben Jack, and Brody Dermody. Photo by Yolanda Hansen.

Since I have always been fascinated with nature throughout my life, I lucked out being placed with Nature

Saskatchewan and it was great to have the opportunity to work with like-minded individuals and discuss topics and opinions about various aspects of the Saskatchewan environment, animals, and overall ecosystems. Working at Nature Saskatchewan I learned a plethora of material about Saskatchewan and the plants and animals native to this beautiful land. Since the organization itself, relies heavily upon volunteer participation, I felt that my time was well spent helping out the staff to finish some of the less crucial tasks, thereby freeing them up to use their time and resources to work on more pressing matters.

While volunteering, I participated in the construction of the spring newsletter, which included aspects of other information programs such as BumblebeeWatch, FrogWatch, PlantWatch, and WormWatch. These projects really informed me on things that people in the community could participate in, to help continue the conservation and protection of our wildlife and environment.

Unfortunately, because Saskatchewan winters are so frigid, I did not get the chance to go out and do fieldwork this time around. I hope to set aside some time in the summer to go back and volunteer and experience the outdoor aspect to Nature Saskatchewan. All in all, I cannot say enough good things about the people that I worked with, the organization itself, and my time spent there. I would highly recommend others that are interested to volunteer at Nature Saskatchewan!

**Printed in:**

*Nature Views* (Spring 2015)

### **Celebrating Stewardship in Saskatchewan: Conservation Awareness Dinner in Elbow, SK**

Kristen Martin, Habitat Stewardship Coordinator, Nature Saskatchewan



Julie Dukat of Douglas Provincial Park speaks to Conservation Awareness Day attendees about invasive species management in the park. Photo by Kaytlyn Burrows.

On a crisp, sunny day this past December, Nature Saskatchewan staff hosted a Conservation Awareness Day at the Civic Centre in Elbow, Saskatchewan. These events are held to thank our Stewards of Saskatchewan participants for their dedication to conserving native prairie and shoreline habitat for species at risk in the province. We host two to three events each year, in a different part of the province each time. We invite all nearby Stewards of Saskatchewan participants, and extend an invitation to all other interested landowners and community members as well. These events provide us with the opportunity to spread awareness about species at risk and stewardship, and for our partner agencies to spread awareness about some of their local conservation initiatives. They also act as a forum for like-minded landowners to share their stories, experiences, and successes with others, and help to foster a community of stewardship.

We began the evening with a delicious roast beef supper, prepared by local caterers, Doris and Ashley Stammes. After the meal, Nature Saskatchewan's Habitat Stewardship Coordinators Kaytlyn Burrows, Ashley Fortney and myself, Kristen Martin, provided a brief overview and update on the Stewards of Saskatchewan programs. Our first guest speaker of the evening was Julie Dukat of Douglas Provincial Park. Julie spoke about the unique habitats found in the park, and how park staff works to conserve those habitats by controlling invasive plant species. We then heard from Renny Grilz, who is the Watershed Coordinator for the South Saskatchewan River Watershed Stewards group. Renny provided an overview of the South Saskatchewan River Watershed, outlining the diversity of stakeholders, needs, and uses of this water source. Renny also introduced some of their programs, including their proactive approach to monitoring for invasive mussel species. Lastly, Corie White from the Water Security Agency walked us through the Agency's adaptive management plan for Piping Plovers on the shores of Lake Diefenbaker. Lake Diefenbaker is one of the largest breeding basins in North America for this endangered species, but as a reservoir associated with Gardiner Dam, the extreme fluctuations in water levels within and between years can rapidly alter the habitat suitability for Piping Plovers. With careful planning and through the use of a diversity of management actions, each year Corie's team is successful in ensuring that almost every Piping Plover nest hatches successfully. All three presenters showed once again how it is possible to achieve a balance between resource use and providing habitat for plants and wildlife.

We would like to thank all of our presenters who came to share their messages and tell us about the important conservation work that they are doing in Saskatchewan. Finally, we are grateful to the Stewards of Saskatchewan participants that attended the event – it is always a pleasure to hear your stories, and we always look forward to visiting with you!

To find out more about the Stewards of Saskatchewan program and how to become involved, please contact us at [outreach@naturesask.ca](mailto:outreach@naturesask.ca) or (306) 780-9273. More information about the exciting initiatives of our partner organizations can be found at the following websites.

Douglas Provincial Park: [www.saskparks.net/douglas](http://www.saskparks.net/douglas)  
South Saskatchewan River Watershed Stewards: [www.southsaskriverstewards.ca](http://www.southsaskriverstewards.ca)  
Water Security Agency: [www.wsask.ca](http://www.wsask.ca)

Partner Update: Nature SK

Stewards of Saskatchewan

With a new year upon us, Nature Saskatchewan's Stewards of Saskatchewan staff is busy making plans and securing funding for the months ahead. For those who aren't familiar with it, the Stewards of Saskatchewan project conserves habitat for species at risk through our five stewardship programs: Operation Burrowing Owl, Shrubs for Shrikes, Rare Plant Rescue, Plovers on Shore, and the Stewards of Saskatchewan banner program. Through these programs, we provide information and support to landowners with species at risk on their land. Program participants agree to voluntarily conserve habitat for species at risk, and actively participate in monitoring target species on their land.

The Stewards of Saskatchewan programs saw many highlights in 2014. Operation Burrowing Owl participants reported 30 Burrowing Owls pairs, up from 21 pairs in 2013. While we cannot interpret this as a population increase, the increased number of sightings of this endangered owl is encouraging. Five new participants joined Operation Burrowing Owl in 2014, bringing the total number of current participants to 363. Together, these landowners are conserving over 148,000 acres of Burrowing Owl habitat.

Shrubs for Shrikes welcomed 31 new participants in 2014, an all-time high! Loggerhead Shrike sightings were also up this year, with participants reporting 200 adults, compared to 108 in 2013. This was mirrored by a high number of shrike sightings by Nature Saskatchewan staff, with grid road searches, property visits, and field observations resulting in a further 184 (117 adult, 67 young) shrike sightings. The 159 Shrubs for Shrikes participants are now conserving over 27,000 acres of Loggerhead Shrike habitat in Saskatchewan.



Rare Plant Rescue further expanded its work into south-western Saskatchewan in 2014, to search for two plant species at risk: Tiny Cryptantha and Dwarf Woollyheads. While we didn't locate the elusive Tiny Cryptantha, we were successful in finding Dwarf Woollyheads in many of the ephemeral wetlands that we searched. Throughout the summer, we conducted plant searches on 29 quarter sections, and monitored 64 plant species at risk occurrences on 20 different quarter sections. We also gained five new participants, including our first participant with Dwarf Woollyheads habitat. We now have 80 current participants, who together are conserving over 103,000 acres of rare plant habitat.

The Plovers on Shore program grew to 44 participants in 2014, with two new landowners joining. Participants are now conserving over 120 km of shoreline habitat for this endangered shorebird. Census results showed a decrease in the number of pairs reported in 2014 (13 pairs, compared to 19 pairs in 2013). We expect that the upcoming 2016 International Piping Plover Breeding Census will provide a more accurate estimate of Saskatchewan's Piping Plover population, and will identify new landowners who might want to participate in Plovers on Shore. Another highlight from Plovers on Shore was working with one of our participants to improve the Piping Plover habitat on their land through funding of a habitat enhancement project.

Finally, 2014 was a great year for our Stewards of Saskatchewan banner program. This program functions like the above target species programs, but it welcomes landowners with all other species at risk on their land to participate. In 2014, we welcomed 29 new participants into this program, so we now have 38 participants who are conserving over 12,000 acres of habitat for a diversity of species at risk, including Barn Swallows, Northern Leopard Frogs, and Monarchs.

Thanks to our hard-working summer staff (Marika Cameron, Beth Dolmage and Emily Putz), we were able to visit with 150 landowners this summer! We also hosted two Conservation Awareness Day events, one in Eastend (in July) and one in Elbow (in December). These free events feature a locally-catered meal and guest speakers presenting on conservation, farm stewardship, agriculture, and environmental topics. They also offer a chance for participants and other interested individuals to meet one another, share their stories, and network with other like-minded individuals as we work to connect the stewardship community in Saskatchewan. If you weren't able to make it to one of our Conservation Awareness Days in 2014, don't despair! We will be hosting another one on February 26th, 2015 in Val Marie. This event, held at the Val Marie Hall, will be catered by Val Marie's own Harvest Moon Café, and will feature a LIVE Burrowing Owl and presentations by the South of the Divide Conservation Action Program, Simply Ag Solutions, Old Wives Watershed Association and the Saskatchewan Burrowing Owl Interpretive Centre. If you are interested in attending, please RSVP to Kaytlyn at [kaytlyn@nature.sk.ca](mailto:kaytlyn@nature.sk.ca) or (306) 780-9832 by February 16th.

We would like to extend a huge thank you to all of our Stewards of Saskatchewan program participants. Your excellent stewardship of the land is a perfect example of the balance that can be achieved between agricultural production and habitat conservation. To find out how you can become involved in the Stewards of Saskatchewan program, please contact our office at [stewardship@nature.sk.ca](mailto:stewardship@nature.sk.ca) or call us toll-free at 1-800-667-HOOT (4656).

## Conservation Awareness Day educates people young and old

BY JORDAN PARKER

At the front of the Val Marie Community Hall, Lori Johnson commands the attention of a captivated audience as she showcases her furry friend.

Two-year-old Cricket sits on his cage, leaning out at the NatureSask representatives, smiling parents and enthralled children, all of whom ask their lingering questions about the burrowing owl.

As Johnson, Owl Coordinator at the Saskatchewan Burrowing Owl Interpretive Centre in Moose Jaw, SK, lets Cricket be petted, the owl poses for pictures galore with composure and grace. "Cricket will be three in July?" a little voice asks as Johnson nods her approval. The child smiles and tells her that their sibling has a birthday in July also.

Just minutes before, Johnson gave a light-hearted speech that highlighted Cricket's individual life and how his species lives at the event, Conservation Awareness Day, which was on February 26 in Val Marie.

Johnson said Cricket was hatched at the facility in Moose Jaw, and spoke about mating, stringent releasing regulations in Saskatchewan, and the fact that Crickets legs are one of his best adaptive traits.

"His long legs are very unique. They're not heavily feathered, and they're just long legs. I like to call them chicken legs," she says as the kids laugh. "In the habitats they call home, they use their long legs to get better visibility around the burrow."

She tells the crowd burrowing owls are most active at dawn and dusk, and that the centre takes care of 12 burrowing owls in all; There are two ambassadors and 10 wild ones.

Kaytlyn Burrows, with her apt last name, is the Habitat Stewardship Coordinator for NatureSask.

"The centre in Moose Jaw is great. They bring an educational live owl, and everyone gets to see and learn about it. We talk history and biology, and it really makes things hit home to see the little guy in real life. It's just really cool," she said.

"Conservation Awareness Day events are done all across southern Saskatchewan. We rotate locations based on our program participants. This year, we had it in Val Marie, and we had one in December in Elbow, and one in July in Eastend," she said.

She says the events were started in 2003 as a trial run, and have grown out of that.

"These events are used to show appreciation for our participants. It's evolved over the years. Sometimes we do tours of habitat-enhanced sites, or we involve a locally catered supper and presentations," she said.

Val Marie's own Harvest Moon Cafe was on hand to feed guests, and Johnson was among the speakers.

Everything that night was in the name of promoting conservation awareness here in the province.

"We really are trying to bring awareness to rural land owners who have native prairie land and species at risk on it. We want to partner to provide support and help maintain these animals," she said.

"Native prairie land is just disappearing at an alarming rate, and we want to preserve what remains. These nights are about showing land owners that this is important and they're important to us." Part of the reason for the event is also to continue to spread awareness and bring more people into the fold.

"We want to keep our current participants engaged and then we want to increase how many people are involved. We try to help out the environment in so many ways, and we try to keep people as a big part of this program."

The group deals with stewardship programs, the first of which was Operation Burrowing Owl in 1987, launched to protect their habitats.

"We have 364 private land owners participating and conserving their land for the the burrowing owls. The project has just had so much consistent participating, and the landowners agreeing to voluntarily help and monitor populations has been huge," she said.

"When they join, they agree to annually report sighting on their land. The relationship we have there is really positive."

Getting involved with NatureSask overall is just a great way to help out.

"It provides great ways to get involved, and you get to have the ability to belong to a community of likeminded people. There are information exchanges and chances for networking. People here just want to maintain a healthy ecosystem for future generations."

SaskNature's vision is to ultimately have "humanity be in harmony with nature," and things like the event in Val Marie help to achieve that.

"We want to engage, inspire people and appreciate nature. We want to learn and protect our natural environment. This organization offers plenty of ways to get involved and do that."

**Printed in:**

*The Advance* (April 22, 2014 and June 10, 2014)

*Nature Views* (Summer 2014 and Spring 2015)

**WANTED**

			
<b>Burrowing Owl</b>	<b>Piping Plover</b>	<b>Loggerhead Shrike</b>	<b>Small-flowered Sand-verbena</b>

**PLEASE REPORT  
SIGHTINGS OF THESE  
SPECIES TO:  
1-800-667-HOOT (4668)  
(SK AND AB ONLY)**

Reporting sightings helps to determine the population size and distribution of species at risk. Personal information is NEVER shared without permission.

*Nature*  
SASKATCHEWAN

**Funding available** for habitat enhancement projects: native grass seeding, wildlife-friendly fencing, and water development sites.  
For more information, please contact  
**Nature Saskatchewan at (306) 780-9833.**

Printed in:

*The Advance* (December 23, 2014)

# *Happy Holidays & Best Wishes for 2015!*

*From all of us at*

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Toll free: 1-800-667-4668

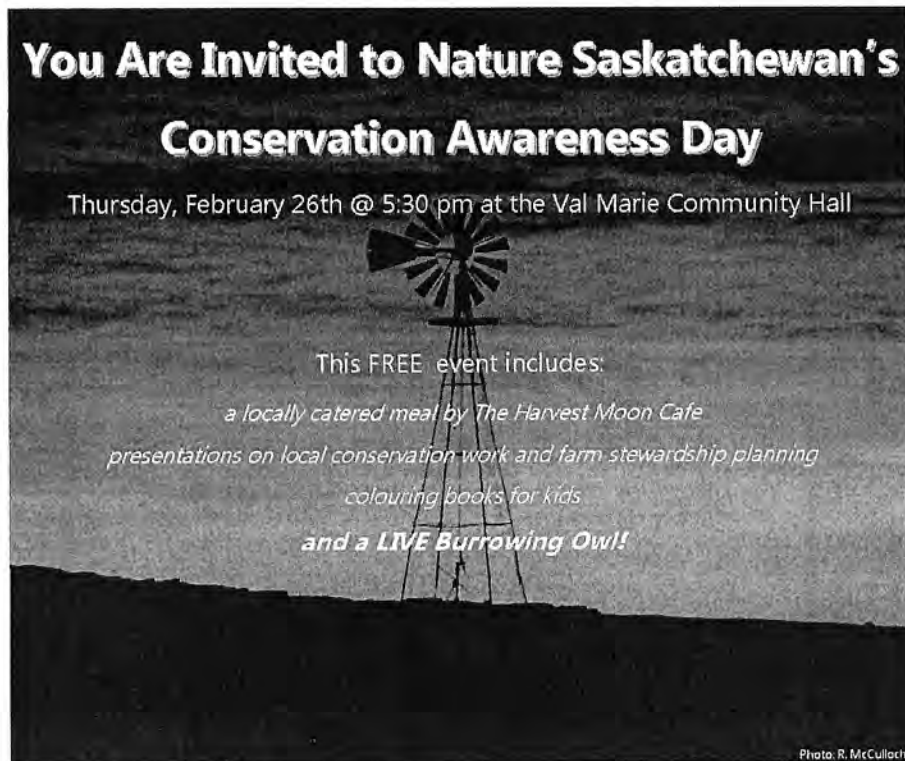


*Watch for details on our  
Conservation Awareness Day  
in the new year!*



**Printed in:**

*The Advance* (February 3, 2015)



**You Are Invited to Nature Saskatchewan's  
Conservation Awareness Day**

Thursday, February 26th @ 5:30 pm at the Val Marie Community Hall

This FREE event includes:

- a locally catered meal by The Harvest Moon Cafe*
- presentations on local conservation work and farm stewardship planning*
- colouring books for kids*
- and a LIVE Burrowing Owl!*

Photo: R. McCulloch

**Aired on:**

Golden West Radio – Shaunavon 1490 CJSN (February 2 – 10, 2015)

“Join Nature Saskatchewan for a Conservation Awareness Day at the Val Marie Community Hall. This FREE event happens February 26th at 5:30 and includes a locally-catered meal, presentations on local conservation work and farm stewardship, coloring books for the kids, and a LIVE Burrowing Owl! Bring your friends and family! Remember, in order to attend you must RSVP by February 11th. Call Nature Saskatchewan at 1-800-667-HOOT. That’s 1-800-667-46-68. Or email [info@naturesask.ca](mailto:info@naturesask.ca).”

**Printed in:**

*The Advance* (March 24, 2015)

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SASKATCHEWAN