

Habitat Conservation Area

A Self-Guided Tour



A SELF-GUIDED TOUR

The Habitat Conservation Area (HCA) is located in Wascana Centre, just south of Wascana Hill. Drive south on McDonald St. beside the hill and park in the parking lot at the curve of the road. Walk south along the maintenance road (blue line on map) to the marsh to find the gated entrance at the east side of the HCA. At a leisurely pace this walk can take 1 hour. Follow the marked green posts.



Station 1

Introduction to the Habitat Conservation Area

The Habitat Conservation Area (HCA) is a 23 acre site in Wascana Centre that has been set aside for wildlife. The area was formerly owned by a number of private landowners but was amalgamated into the HCA in the 1970's. For the last 50 years this area has not been manicured or managed in the same manner as the rest of the Centre. It provides valuable habitat for various mammals, birds, reptiles, amphibians, fish, insects and plants. This location is open to the public year round, however, we ask that you refrain from bringing your dog or riding bikes in this area.

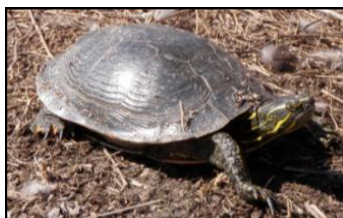
Station 2

Reptiles and Amphibians of Wascana Marsh

Several species of reptiles and amphibians live in the marsh and surrounding habitat. Western Painted Turtle (*Chrysemys picta*), Plains Garter Snake (*Thamnophis radix*), Wood Frog (*Rana sylvatica*), Boreal Chorus Frog (*Pseudacris maculata*) and Tiger Salamander (*Ambystoma tigrinum*) can all be found within the HCA.

If you walk quietly along the bank in front of you and look across the dugout, Painted Turtles can be seen on sunny days, throughout the spring, summer and fall, basking along the shore. Turtles, being reptiles, are ectothermic (i.e. cold-blooded) and need to absorb heat from the environment by basking, in order to warm up their bodies. Western Painted Turtles are at the northern limit of their range in Saskatchewan and must hibernate for many months of the year. They do this by burrowing into the mud near the shore, allowing their body temperature to reduce and therefore dramatically slowing all body processes.

While scanning the banks, if you notice a rather large Painted Turtle, take a closer look because it may be Olga, the largest Western Painted Turtle ever recorded in North America. Discovered in 2015, she measured 27.2cm in carapace (dorsal) length.



Western Painted Turtle

As you approach the waters edge you may also see Wood Ducks (*Aix sponsa*) and Belted Kingfishers (*Megaceryle alcyon*) resting in the willows. The Wood Ducks were released in Wascana Centre in 1997 and some have returned to nest every year. Kingfisher can be seen here and throughout Wascana Marsh during the spring and fall when they are migrating.

Station 3 Aquatic Life

The waters of Wascana Creek are home to many aquatic invertebrates and fish. If you dip a net into the water here you might pull out: water boatmen, gammarus (fresh water shrimp), predacious water beetles, or dragonfly/damselfly nymphs. Aquatic invertebrates play an important role in aquatic ecosystems as a food source for many fish, amphibians, birds, and even other invertebrates.



Dragonfly
Metamorphosis

Brook Sticklebacks (*Culaea inconstans*), and Fathead minnows (*Pimephales promelas*) can also be caught while dip netting. These small minnow species, less than 10 cm in length, thrive in Wascana Marsh. Both can tolerate lower dissolved oxygen levels than most fish and thus can utilize habitats that are unreachable by predators and other competitive species. Wascana Creek has an abundance of food

for these small fish in the form of aquatic insects and zooplankton that allow the stickleback and minnow to grow quickly and reproduce effectively.

When you are pond dipping take note of all the unique plants along the waters edge. Cattail (*Typha latifolia*), Great Bulrush (*Scirpus validus*), Reed Canary Grass (*Phalaris arundinacea*), and Common Reed Grass (*Phragmites communis*) are a few of the more prominent species. Cattails have brown hotdog like seed heads and flat leaves, light green in colour. This plant is efficient at naturally filtering water. The Giant Bulrush is a large dark green plant with a round stem. The tall bamboo like grass growing in the northeastern corner of the dugout is Common Reed Grass. This tall grass can grow more than two meters in height and favors the edges of wetlands in damp soil or standing water.

Station 4

Alkali Spots

Along the path you may notice areas that are covered by a white crust. This is alkali; an area where water pools, then evaporates leaving behind salt. The white stuff is the salt. Vegetation is critical in retaining soil moisture, thus a reduction in vegetation cover, or disturbance, can cause the alkali patch to increase in size.



Alkali area

Because of high salt concentrations not many plants can grow in a habitat like this, however a few are uniquely adapted for it. The plants that can grow here all have adaptations that enable them to get rid of excess salt. Red Samphire (*Salicornia rubra*) is a short, red, waxy plant found growing amongst the alkali areas. Its stem tips break off when salt concentrations become too high. Red Samphire is edible and was used by First Nations in Saskatchewan. Pigweed (*Chenopodium sp.*), a member of the Goosefoot family, secretes salt from glands on its leaves allowing it to also grow in saline areas. Foxtail Barley (*Hordeum jubatum*) is another salt tolerant plant and can be found on the edges of alkali patches.

Certain bird species will utilize saline wetlands and alkali flats. The American Avocet, Killdeer, and the endangered Piping Plover all will nest in alkali areas and feed in saline sloughs. The Avocet and Killdeer both nest along the shores of the islands within Wascana Marsh and can often be observed here spring through fall.

Station 5

Wetland Birds

Wetlands are home to a variety of wildlife and represent a critical habitat component for many species. Birds, mammals, reptiles, amphibians, insects and fish all use wetlands for a portion of or all of their life. Many interesting marsh birds can be seen in Wascana Centre and along Wascana Creek.

The most common bird in North America, the Red-winged Blackbird (*Agelaius phoeniceus*), utilizes wetlands for nesting habitat throughout southern Saskatchewan. Red-winged Blackbirds have a unique polygamous breeding method where one male defends a territory in which several females will make their nests. If you watch carefully you may see a male actively chasing other males away from his territory.



Male Red-winged Blackbird

The Marsh Wren (*Cistothorus palustris*) is a feisty little bird that also inhabits Wascana Marsh during the breeding season. This species is regularly heard, but not seen. Marsh Wrens build their suspended nests in cattails and bulrush. Male Marsh Wren's build up to eight dummy nests in their territory in order to trick predators.



Marsh Wren

Another more colorful wetland bird that can often be observed in Wascana Centre is the Common Yellowthroat (*Geothlypis trichas*). The Common Yellowthroat is a small warbler with a black mask, bright yellow throat and olive green back.

Station 6

Caragana

Early in the history of Wascana Centre the HCA was privately owned and used for market gardens. Caragana (*Caragana aborescens*) was planted in rows to delineate property lines. Caragana is a non-native plant originating in Russia. It was brought over by early settlers to Saskatchewan for use in shelterbelts around farmyards in the south and later in windrows to reduce soil erosion in fields.

In a natural prairie ecosystem fire and grazing reduce the invasion of trees and shrubs. Without these two pressures the Caragana in the HCA has spread significantly since its initial planting. As a result Wascana Centre has endeavored to remove these shrubs in this area to return the area to a more native prairie grassland.

In the summer of 2012, Wascana Centre brought in a herd of goats to help control the Caragana in this location. The goats specifically targeted the Caragana as they prefer shrub and tree leaves over grass. Can you see any signs of the goats?



Prairie fire



Goats in the HCA

Station 7

Pelicans, Cormorants and Terns

If you look out from the shore to the west you will see an island called Tern Island. In the past this island was home to a nesting colony of up to 80 Common Terns (*Sterna hirundo*). They would arrive here in spring, nest on the gravelly shore of the island and dive for fish in Wascana Lake to feed to their chicks. Terns are now seen only seen feeding in the summer but do not



Common Tern

nest as the island no longer has the gravelly shore due to willow growth.

Throughout the spring and summer American White Pelicans (*Pelecanus erythrorhynchos*) can be seen on Wascana Marsh. These are juvenile or non-breeding adult birds who are spending their summer away from larger breeding colonies. Pelicans nest on islands, in large colonies, on several lakes in Saskatchewan including Old Wives Lake southwest of Moose Jaw. Pelicans use their large bill to catch fish, salamanders, frogs, and crayfish.

The Double-crested Cormorant (*Phalacrocorax auritus*) is also present in Wascana Marsh throughout the spring and summer. Once again these are juvenile or non-breeding adult birds. Cormorants nest in large colonies, usually on islands devoid of vegetation. Commonly pelican and cormorant colonies are on the same island. Dore Lake in Saskatchewan is home to a large colony of nesting cormorants. Double-crested Cormorants feed mainly on fish including various species of minnows and other rough fish like Cisco (*Coregonus artedii*).

Station 8

Old Homestead

The area now in front of you is a former yard site and many exotic shrub species thrive here. Cotoneaster (white flowers), Lilac (purple flowers), and Flowering Almond (light pink flowers) are a few that can be easily identified and were planted here for their visual appeal.

This is the only location in the HCA where Canada Anemone (*Anemone canadensis*), a native prairie species grows. Watch for this white flower blooming in June and July.



Canada Anemone

Station 9

Native Prairie

As you turn east you will see an area that resembles native prairie, although the plants in this area consist mainly of Smooth Brome (*Bromus inermis*) and Crested Wheatgrass (*Agropyron cristatum*), both non-native grasses now considered invasive.

However, if you look closely, you can find a few native grass species such as Green Needle Grass (*Stipa viridula*) and Western Wheatgrass (*Pascopyrum smithii*) still holding their ground. Some native flowers that can be found at this location include Black-eyed Susan (*Rudbeckia hirta*) and Coneflower (*Ratibia columnifera*).

Before the arrival of Europeans in North America much of what we now consider farmland was native grasslands. The Great Plains stretch from central Saskatchewan south to Texas in what would have been a sea of grass.



Green Needle Grass seed head (left)
Western Wheatgrass seed head (right)

Today much of this habitat has been altered and what remains is greatly fragmented. Many of the species that inhabit the grasslands are threatened or endangered, such as the Sprague's Pipit (*Anthus spragueii*), Bobolink (*Dolichonyx oryzivorus*), and Chestnut-collared Longspur (*Calcarius ornatus*). These birds were once common around Regina.

The Plains Bison (*Bison bison*) were the main grazer on the prairies and would heavily graze and churn the soil in one area



Historical extent of the grasslands

and then move on and do the same in another area. Grazing, along with fire, kept the prairie healthy removing or repositioning dead plant material and spurring the growth of new plants.

Regina sits along the edge of what is considered the moist-mixed grassland. This grassland community was dominated by species such as Northern Wheat Grass (*Agropyron dasystachyum*), Blue Grama (*Bouteloua gracilis*) and Western Porcupine Grass (*Stipa curtiseta*). Dozens of other grass, forb and shrub species can be found throughout the prairies. Wascana Centre is beginning to replant native grasses and forbes in the HCA in order to return it to a native prairie community.

Station 10

Small Mammals

As you continue along the path, you will walk through an area filled with wild rose bushes. Their pink flowers provide nectar for insects, while the rosehips (the fruit of the rose) provide food for small mammals and birds. The wild rose in Saskatchewan is actually two separate species, Wood's Rose (*Rosa woodsii*) and the Prickly Rose (*Rosa acicularis*), which can be difficult to tell apart.

This shrubby habitat provides ideal shelter for small mammals such as voles, mice and shrews. Meadow Voles (*Microtus pennsylvanicus*) and Deer Mice (*Peromyscus maniculatus*) would be the most commonly encountered rodents in the HCA. Voles can be identified by their plump appearance and short tail, where as mice are sleeker, with big ears, bulgy eyes, and a tail nearly as long as their body. Southern Red-backed Voles (*Clethrionomys gapperi*) and Northern Grasshopper Mice (*Onychomys leucogaster*) can also be seen on occasion.

Shrews are another small mammal often found in Wascana Centre and can be seen foraging for insects in the grass. Shrews are not rodents; they do not have large incisors but rather many small sharp teeth for killing and chewing insects that make up the majority of their diet.



Northern Short-tailed Shrew

The Masked Shrew (*Sorex cinereus*) and Northern Short-tailed shrew (*Blarina brevicauda*) are the two most commonly encountered species. The Northern Short-tailed Shrew is one of only two poisonous mammals in the world. Do not worry though, their venom is only deadly to their small insect prey. Their bite would only cause a slight skin irritation in humans.

Up on the hill is a fox den. This den has been used by Red Fox (*Vulpes vulpes*) for many years. Red Fox feed primarily on small mammals but will also take birds or carrion on occasion. Foxes breed in the late winter and have four to six kits in the spring. Kits are born blind, deaf and toothless and will remain in the den



Red Fox

for three to four weeks. Do not approach the den as foxes carry heavy flea loads and do not appreciate disturbance of their den site.

Station 11

Studying Wascana Marsh's Songbirds

In an effort to monitor populations of songbirds that call Wascana Marsh home, Wascana Centre established a Monitoring Avian Productivity and Survivorship (MAPS) station in the HCA in 2010. Over a total of six days, evenly distributed throughout June to the first week of August, 10 large mist nets, which are used to capture small songbirds were set up. Birds that are captured are gently removed from the nets and taken to the banding tent, where they are banded, aged, sexed, measured and released. Long-term data that was collected from the banding process allow for population trends of certain species to be understood on a local scale (i.e. Wascana Marsh) as well as on a large regional or continental scale (i.e. Western Canada and North America).

Since the Wascana MAPS station was established 2,700 birds of 50 different species have been banded. The top species captured are Yellow Warbler (*Dendroica petechia*; 781), Cedar Waxwing (*Bombycilla cedrorum*; 295), American Robin (*Turdus migratorius*; 239), Gray Catbird (*Dumetella carolinensis*; 174) and Red-winged Blackbird (*Agelaius phoeniceus*; 172). If you have binoculars look closely to see if you can find a banded bird in the HCA!

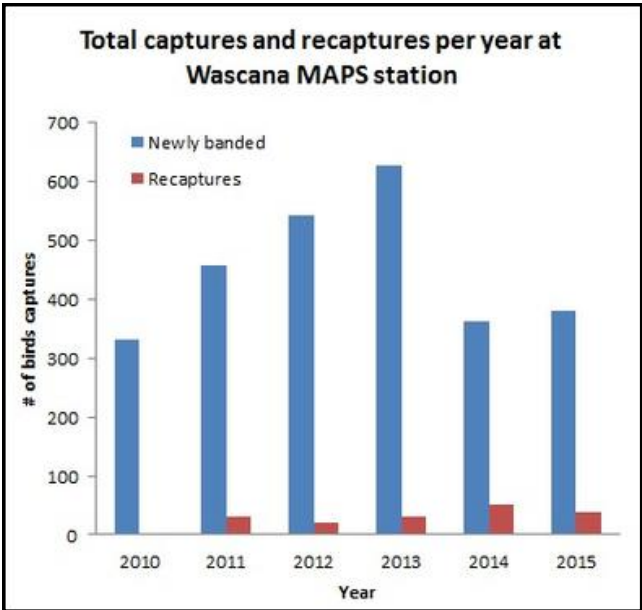
Some of the fascinating stories of some of these birds is how long they live. The oldest known Robin to the Wascana MAPS station is at least seven years old, while one of Gray Catbirds is at least six years old and has been captured every year since being banded in 2011! One of the male Red-winged Blackbird banded in 2010 as a 1 year old bird was not recaptured for another five years, in 2015. I wonder where he was in between that time?



Wascana Centre graciously acknowledges the Friends of Wascana Marsh for their contribution to establishing the Wascana MAPS station as well as their continued volunteer support.



Western Kingbird



Baltimore Oriole



Sunrise over the HCA



Downy Woodpecker



Cedar Waxwing

Station 12

Management of the Habitat Conservation Area

Since the creation of the HCA, this area has not been manicured like the rest of Wascana Centre. Instead, Wascana Centre Authority's goal is to manage the HCA as a natural ecosystem to attract and maintain healthy wildlife and plant populations.

Over the last couple of decades, some invasive species have moved into this area, such as Purple Loosestrife (*Lythrum salicaria*), Canada Thistle (*Cirsium arvense*) and Absinthe (*Artemisia absinthium*). In an effort to reduce and eliminate these noxious weeds, as well as other non-native plants, WCA has utilized a number of different strategies.

- In 2009, Wascana Centre brought in equipment to remove a large area of Caragana from the west side of the HCA. This area is being restored to a grassland ecosystem.
- In 2010, native shrubs and trees were planted on the east side of the HCA to replace the Caragana removed in 2009. Species included Green Ash (*Fraxinus pennsylvanica*), Manitoba Maple (*Acer negundo*), and Saskatoon (*Amelanchier alnifolia*).
- Selective mowing of Western Snowberry (*Symphoricarpos occidentalis*) was conducted in the fall of 2012 to reduce the density of this shrub in the HCA, which will increase use of grassland songbirds like Savannah Sparrows.
- Since 2012, volunteer pulls have been organized to attempt to reduce the Purple Loosestrife in the marsh areas of the HCA and surrounding areas.
- From 2012-2015, Wascana Centre and Friends of Wascana Marsh, brought a herd of goats into the HCA to graze naturally. The goats specifically targeted the caragana and weed species on the west side of the HCA. In this time the area was cleared of Caragana and is mowed in the fall to maintain any potential spread
- In 2018, Black-margined Loosestrife Beetles were released to combat the Purple Loosestrife in the park. The release was a success with the beetles feeding on the plant immediately, preventing some from flowering and going to seed. The population overwintered successfully and have continued to grow and spread throughout the park.

Thanks for visiting the Habitat Conservation Area!

If you have any questions or would like to report any unique observations from your tour, please email Wascana Centre at wascanainfo@gov.sk.ca.