

Appendix C
Species At Risk

Eastern Wolf

*Previous names: Eastern Grey Wolf
Grey Wolf*

Scientific name: *Canis lupus lycaon*
Taxonomic group: Mammals (terrestrial)
Range: ON QC

Status under SARA*: Special Concern, on [Schedule 1](#)
Last COSEWIC designation:** Special Concern (May 2001)

*SARA: The Species at Risk Act

**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada

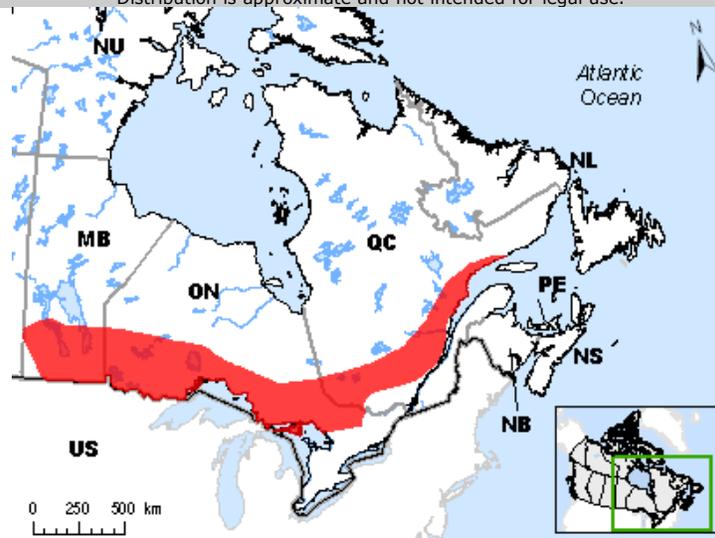


Description

The Eastern Wolf is a smaller form of the grey wolf. Recent genetic analyses have shown that it contains both red wolf and coyote genes. It has a fawn-coloured pelt with long black hairs on the back and sides, and a reddish colour behind the ears. Adult males weigh between 25 and 35 kg, and females weigh between 20 and 30 kg.

Canadian Distribution of the Eastern Wolf (shown in red)^{1,2}

Distribution is approximate and not intended for legal use.



¹Author: Canadian Wildlife Service, 2004

²Data Sources: The main source of information and data is the COSEWIC Status Report. In many cases additional data sources were used; a complete list will be available in the future.

Distribution and Population

The Eastern Wolf is found mainly in the Great Lakes and St. Lawrence regions of Quebec and Ontario. Its current range covers approximately 210,000 km², which represents 42 % of its original range in Canada. Its distribution and taxonomic classification (whether it is a species or a sub-species) are currently under review. The number of Eastern Wolves is estimated at 2,000 individuals, 1,000 of which are breeding adults, spread among 500 packs. The highest population densities are found in southwestern Quebec and southeastern Ontario, particularly in Algonquin Park. Although the species has disappeared from the more populated, southern portions of its range, and although some local populations are being hunted at unsustainable levels, the species' overall abundance seems to have remained relatively stable over the past decade.

Habitat

The Eastern Wolf inhabits deciduous and mixed forests in the southern part of its range, and mixed and coniferous forests further north.

Biology

The sub-species preys on white-tailed deer and moose, as well as on caribou in the northern part of its range.

Threats

Mortality caused by human activity, such as hunting and trapping; roadkills; industrial, agricultural and residential developments; as well as the abundance of prey, are the main limiting factors for Eastern Wolves. Recent genetic studies have also demonstrated the possibility of hybridization between Eastern Wolves and coyotes, which could be a long-term threat to the sub-species' genetic integrity.

Protection

The Eastern Wolf is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

The Eastern Wolf is protected by the *Quebec Act Respecting the Conservation and Development of Wildlife*. Under this Act, it is prohibited to hunt this species or disturb its habitat without a permit.

Recovery Progress and Activities

Summary of Progress to Date

A Management Plan is being developed for the Eastern Wolf by June 2008.

The Eastern Wolf is protected under Ontario's Fish and Wildlife Conservation Act, 1997, and hunting and trapping of this wolf are permitted only under a license. In 2004, the eastern wolf was included on the list of Species at Risk in Ontario with a status of Special Concern.

Summary of Research/Monitoring

Ongoing monitoring and assessment activities include evaluation of wolf abundance using aerial surveys, and the use of genetic and morphological analysis to determine and monitor the provincial distribution of Eastern Wolves and other canids and to monitor hybridization levels.

A number of research studies are underway to improve knowledge of the ecology of wolves in the various habitats of Ontario, to expand understanding of predator-prey relations, to study factors affecting the population growth of wolves in Algonquin Provincial Park with particular focus on the

effect of the protective ban, and to evaluate how protected areas across Ontario influence wolf populations.

Summary of Recovery Activities

Ontario's comprehensive approach to the conservation of Eastern Wolves and the prey and habitat upon which they depend includes legislation and policy, monitoring and assessment, research and reporting.

The Strategy for Wolf Conservation in Ontario (2005) provides the framework for decision-making to help ensure that all wolves continue to contribute to biodiversity and to the social, cultural and economic interests of the people of Ontario into the future. The strategy includes the identification of the vital information and knowledge necessary for wolf conservation. Ontario implemented a management and research strategy specific to the conservation of the wolves in Algonquin Provincial Park in 2001. The park is the largest protected area for the Eastern Wolf.

Regulatory measures implemented to date to protect wolves and obtain improved harvest data include a year-round closed hunting and trapping season in and around Algonquin Provincial Park, a closed hunting and trapping season from April 1 to September 14 across core wolf range to protect wolves raising young, a requirement that hunters purchase a wolf game seal with a limit of two seals per year, and mandatory reporting by hunters and trappers and by persons that destroy a wolf in protection of property. Coyotes were included in these measures because it is difficult to distinguish Eastern Wolves from Coyotes where their ranges overlap.

Ontario recently reported on the health and management of wolves in a Wolf State of Resources Report.

URLs

The Science Behind Algonquin's Animals: Wolf Research in Algonquin Provincial Park
<http://www.sba.ca/projects.asp?cn=314>

Parks Canada: The Eastern Wolf of La Mauricie National Park of Canada
http://www.pc.gc.ca/nature/eep-sar/itm5-/eep-sar5f_e.asp

Least Bittern

Scientific name:	<i>Ixobrychus exilis</i>
Taxonomic group:	Birds
Range:	MB ON QC NB
Status under SARA*:	Threatened, on Schedule 1
Last COSEWIC** designation:	Threatened (November 2001)

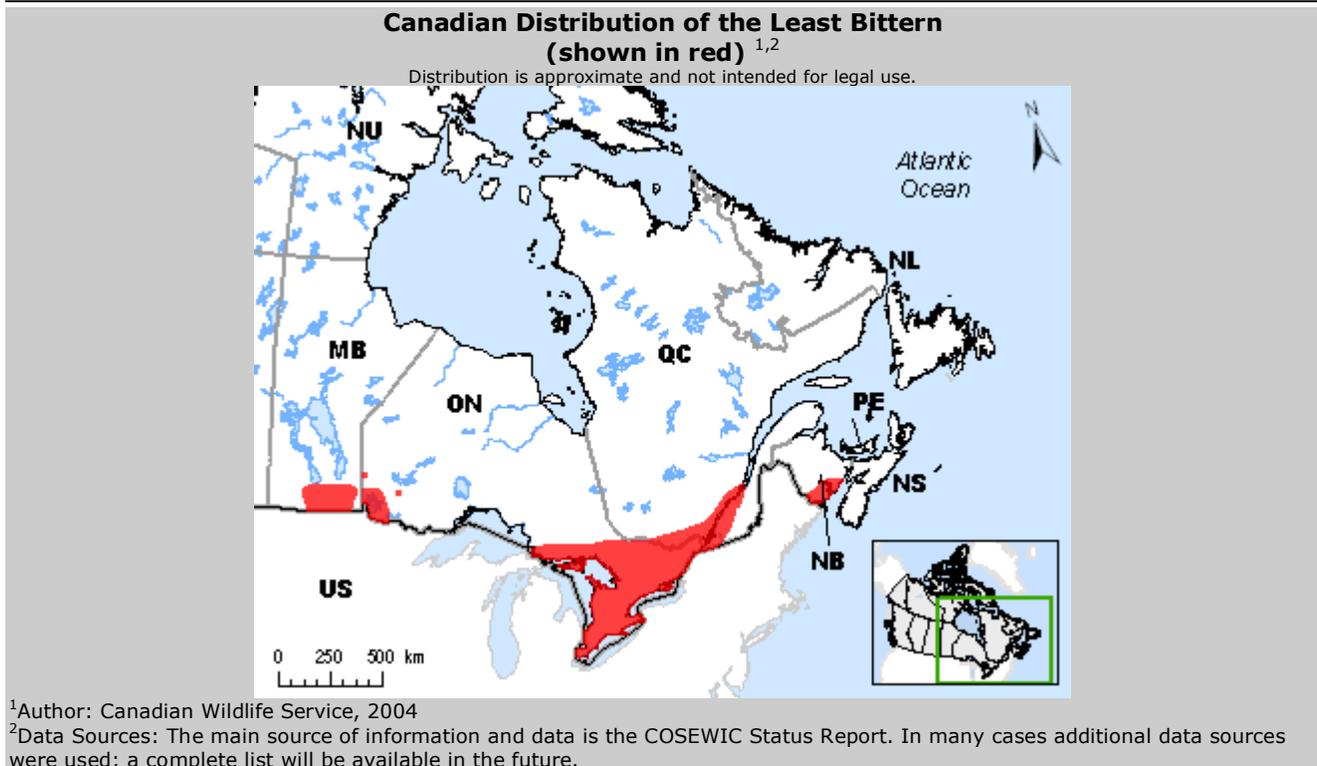
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**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada



Description

The Least Bittern is a relatively small member of the heron and bittern family. It is a buffy-brown bird that blends in well with its usual surroundings of waterside vegetation. It holds a still, reed-like pose at the water's edge while waiting for the approach of fish and other prey. The adult male's underparts and the sides of its head and neck are buff, while the back of the neck is chestnut; the top of the head, the back and the tail are brownish-black; its throat is whitish; and the yellow bill has a dark ridge. The adult female resembles the male, but the top of the head, the back and the tail are chestnut; it has two buff lines on its back and its throat and underparts are streaked with brown. The juvenile birds resemble the females, but the feathers of the back have buffy tips and the crown and back are a light brown.



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Distribution and Population

Least Bitterns breed from southern Canada south to South America, and winter from California, Texas and Florida to Panama and Colombia. In Canada, the Least Bittern has been reported in all the provinces except Prince Edward Island. Nesting in Canada occurs in the extreme south of Manitoba, south of the Canadian Shield in Ontario, in the extreme southwest of Quebec, in the extreme southwest of New Brunswick, and possibly occasionally in Nova Scotia.

The Canadian population of Least Bitterns is estimated at less than 1000 pairs. The majority of Least Bitterns that breed in Canada are found in Ontario. The Canadian population is likely continuing to slowly decline, but reliable survey methods to estimate the population size and trend over time have not been developed.

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Habitat

Least Bitterns nest in freshwater marshes, where dense tall aquatic vegetation is interspersed with clumps of woody vegetation and open water. They are most regular in marshes that exceed 5 ha in area. In the northern part of their range, they are most strongly associated with cattails (*Typha* spp.), the most common tall emergent aquatic plant.

Biology

There is no information on the age at which the Least Bittern attains sexual maturity. It builds its nest on a clump of marsh vegetation barely above water level. The clutch size varies from 2 to 6 (usually 4 or 5) bluish- or greenish-white eggs. It has been suggested that Least Bitterns can have two broods in one season.

Threats

The main factor for the decline in the numbers of Least Bitterns is loss of habitat due to the drainage of wetlands. Natural succession, the natural filling in of wetlands by woody vegetation, has also been a cause of habitat loss. In southwestern Ontario, more than 90% of the original

marshes are gone. Human disturbance during the nesting period is a second important limiting factor. For example, recreational water boats which create high waves can adversely affect the reproductive success of Least Bitterns. Since Least Bitterns are partially nocturnal and tend to fly very low, they are sometimes killed by cars or by collisions with hydro lines or buildings.

Protection

The Least Bittern is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

The Least Bittern is protected by the federal *Migratory Birds Convention Act*. Under this Act, it is prohibited to kill, harm, or collect adults, young, and eggs. This species occurs in Point Pelee, Bruce Peninsula, and St. Lawrence Islands national parks, where it is protected under the *Canada National Parks Act*.

Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name National Recovery Strategy for the Least Bittern (*Ixobrychus exilis*)

Status Recovery team/planner in place

Number of Action Plans 0

Name National Recovery Strategy for the Walpole Island Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name North American Monarch Conservation Plan

Status Preliminary draft received by leads

Number of Action Plans 0

Population Estimates

stable to decreasing Estimated to be less than 500 in 2007
Manitoba

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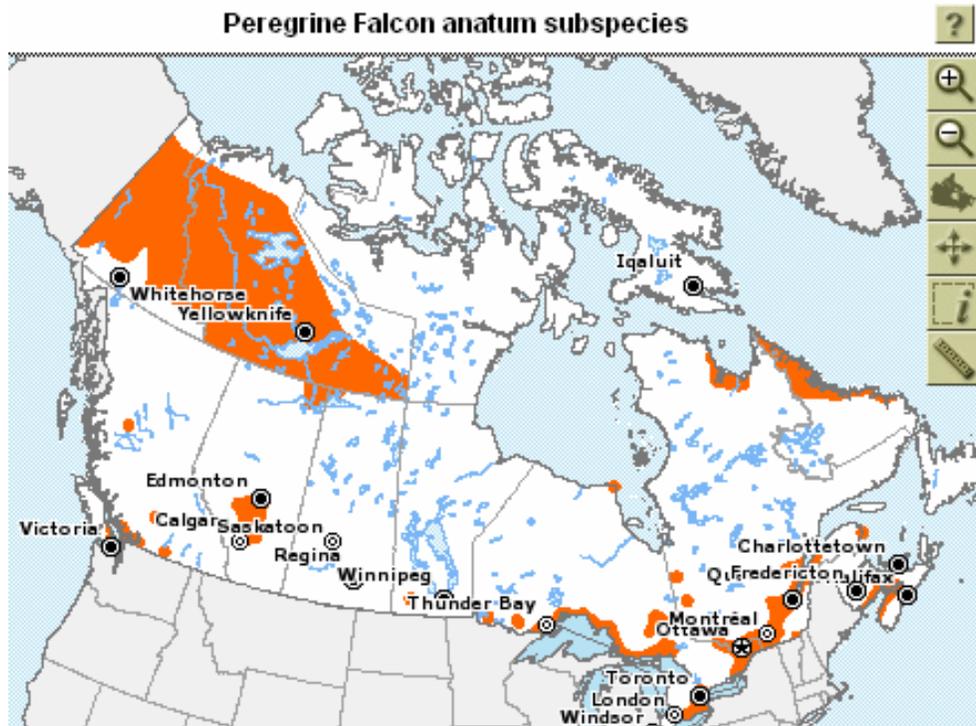
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Peregrine Falcon *anatum* subspecies



Blanding's Turtle

Great Lakes / St. Lawrence population

Previous names: *Blanding's Turtle (Great Lakes population)*

Scientific name:

Emydoidea blandingii

Taxonomic group:

Reptiles

Range:

ON QC

Status under SARA*:

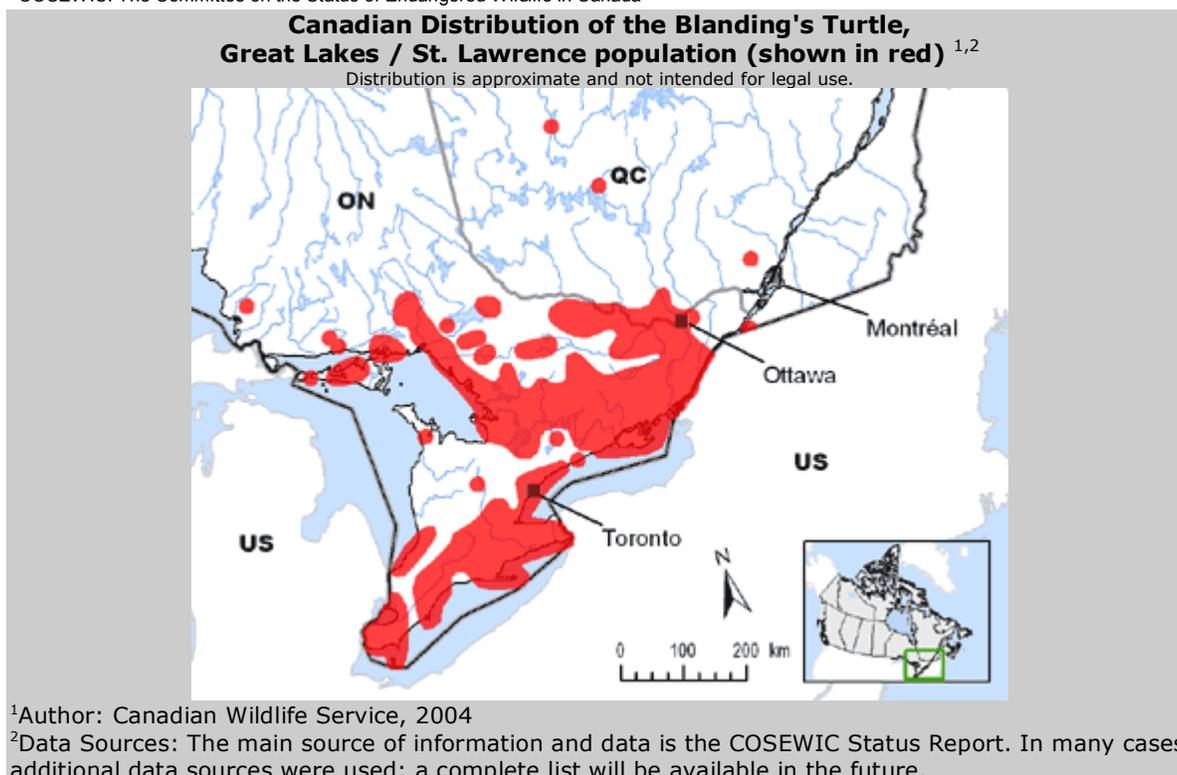
Threatened,
on
[Schedule 1](#)
Threatened
(May 2005)

Last COSEWIC
designation:**

Threatened
(May 2005)

*SARA: The Species at Risk Act

**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada



Protection

The Blanding's Turtle Great Lakes / St. Lawrence population is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name National Recovery Strategy for the Walpole Island Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name Quebec's Recovery Plan for five turtle species (Wood Turtle, Northern Map Turtle, Blanding's Turtle, Stinkpot and Spotted Turtle)

Status Published by Jurisdiction

Number of Action Plans 0

Name Recovery Strategy for Species at Risk Turtles in Ontario

Status Recovery team/planner in place

Number of Action Plans 0

Name North American Monarch Conservation Plan

Status Preliminary draft received by leads

Number of Action Plans 0

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Milksnake

Previous names: Eastern Milksnake

Scientific name: *Lampropeltis triangulum*
Taxonomic group: Reptiles
Range: ON QC

Status under SARA*: Special Concern, on [Schedule 1](#)
Last COSEWIC designation:** Special Concern (May 2002)

*SARA: The Species at Risk Act

**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada

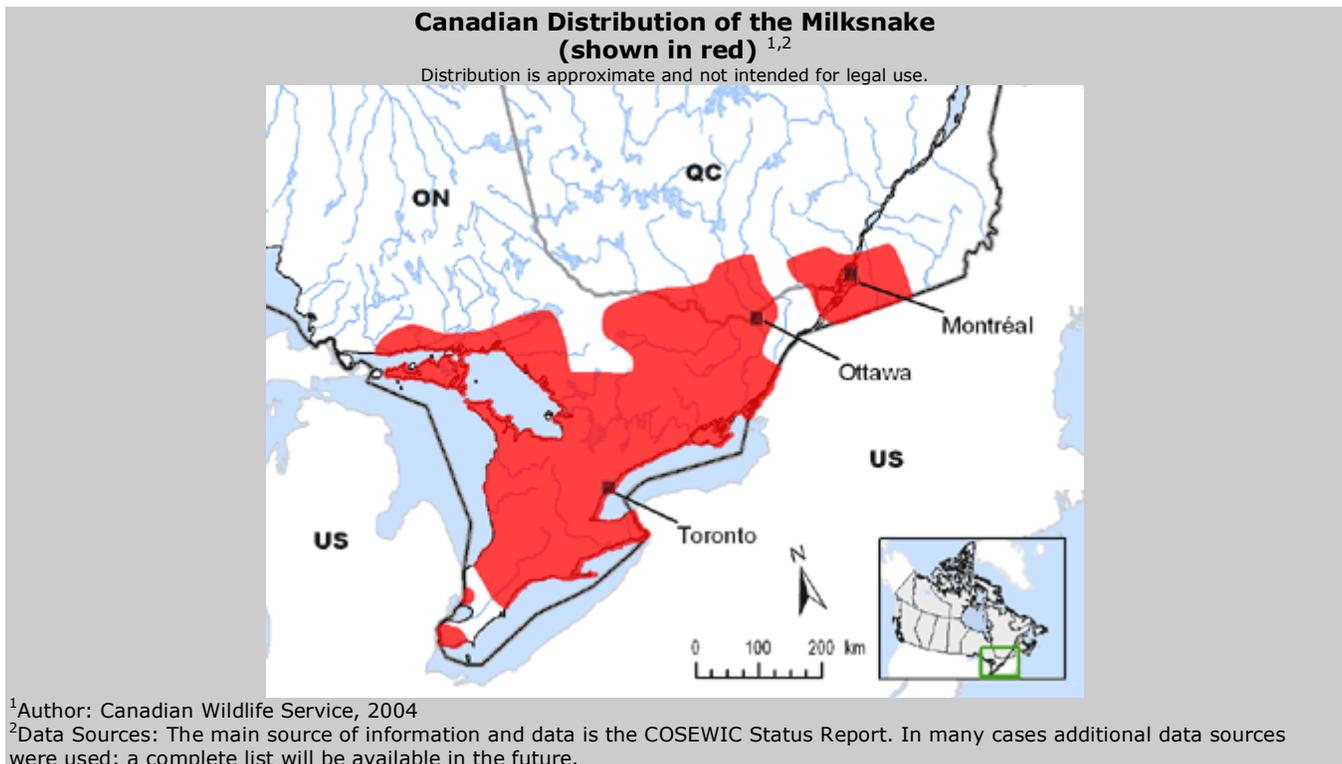


Taxonomy

There are 25 subspecies of the Milksnake found in North America. Only one subspecies, the Eastern Milksnake, has a distribution that extends northward into Canada.

Description

The Milksnake is a shiny, relatively slender, large snake with smooth scales. Although individuals can vary somewhat in colour, the base colour is tan, brown, or grey, with numerous black-bordered brown, copper, or red saddles down the back, alternating with smaller irregular blotches on the sides. The belly has a white and black checkerboard pattern. There is often a characteristic "Y"- or "V"-shaped, light-coloured patch on the back of the neck and head, but sometimes this is absent. The blotches, or saddles, are bright red on young Milksnakes, and become duller and more brownish as the snakes mature. The largest individual on record was 132 cm long, but lengths between 60 and 90 cm are more typical.



Distribution and Population

Milksnakes are found from southern Canada, throughout the United States and Mexico, and into northern South America. In Ontario, the snake can be found as far north as Lake Nipissing and Sault Ste. Marie. In Quebec, it occurs along the border between Quebec and Ontario, south of the St. Lawrence River, and east of the St. Francois River. There are no population estimates of the Milksnake available for either Quebec or Ontario. Observations in Ontario suggest that it has maintained much of its historical range, although the species has likely been extirpated from some large urban centres or areas of intensive agricultural use where habitat has been lost. In Quebec, the population is small, but apparently stable.

Habitat

The Milksnake is best known for occurring in rural areas, where it is most frequently reported in and around buildings, especially old structures. However, it is found in a wide variety of habitats, from prairies, pastures, and hayfields, to rocky hillsides and a wide variety of forest types. Two other important features of good Milksnake habitat are proximity to water, and suitable locations for basking and egg-laying.

Biology

The name "Milksnake" stems from the erroneous belief that these snakes would enter barns and steal milk from cows. This is obviously false; the snake's jaw is not adapted for sucking, and its teeth are very sharp! Milksnakes visit barns in search of rodents, which they consume in large numbers. Young Milksnakes eat worms and young snakes of other species. Milksnakes are constrictors, suffocating their prey before swallowing it. They are diurnal (active at dawn and dusk) in the spring and fall, but become largely nocturnal (active at night) in the summer. They are very secretive and spend much of their time hiding beneath logs, rocks, boards, bark, and other debris. In Canada, Milksnakes go into hibernation in late October or early November. They select sites, such as mammal burrows, hollow logs, gravel or dirt banks, old wells, or old building foundations that have enough moisture to prevent them drying out over the winter. They emerge from their hibernacula in April or May, and most mating occurs in May. Females appear to gather at communal egg-laying sites in early June, and deposit clutches of 8 to 11 eggs each, often within several centimetres of each other. It is not known why females congregate, but it is suspected that it may be due to a lack of suitable nesting sites, rather than for social reasons. Eggs are laid in a variety of locations, including compost or manure piles, stumps, under boards, or in loose soil. The hatchlings emerge from the eggs after 50 to 70 days, cutting their way through the shell using the egg tooth on the tip of their snout. The young snakes are 162 to 241 mm long, and may or may not feed before entering hibernation. Milksnakes do not bask as openly as other snakes. They are frequently discovered beneath an object that is in direct sunlight, absorbing heat from its underside. When threatened, milksnakes will flee; but if one is cornered, it will hold its ground, raise its head, and strike. It also vibrates its tail against the ground, creating a rattling sound (especially against dry leaves). These behaviours lead some people to mistake Milksnakes for rattlesnakes, and kill them because they believe they are dangerous.

Threats

The two greatest causes of population decline are likely road mortality and deliberate killing by humans. Milksnakes are also affected by habitat loss and modification due to urbanization, as well as predation (both by natural predators and domestic dogs and cats).

Protection

The Milksnake is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

The Milksnake also occurs in at least five national parks, thereby benefiting from the protection of the *Canada National Parks Act*. The Milksnake is listed as a "specially protected" species in Ontario in the *Fish and Wildlife Conservation Act*. Under this Act, it is forbidden to hunt, trap, kill, trade, or hold in captivity any specially protected species without a permit. In Quebec, the Milksnake is protected under the *Act respecting the conservation and development of wildlife*. This Act protects animals from captivity or trade, and makes it illegal to disturb, destroy, or damage the eggs, nest, or den of an animal.

[Recovery Initiatives](#)

Status of Recovery Planning

Recovery Strategies :

Name National Recovery Strategy for the Walpole Island Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name North American Monarch Conservation Plan

Status Preliminary draft received by leads

Number of Action Plans 0

Recovery Team

Walpole Island Ecosystem Recovery Team

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Northern Map Turtle

Scientific name: *Graptemys geographica*
Taxonomic group: Reptiles
Range: ON QC

Status under SARA*: Special Concern, on [Schedule 1](#)
Last COSEWIC designation:** Special Concern (May 2002)

*SARA: The Species at Risk Act

**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada

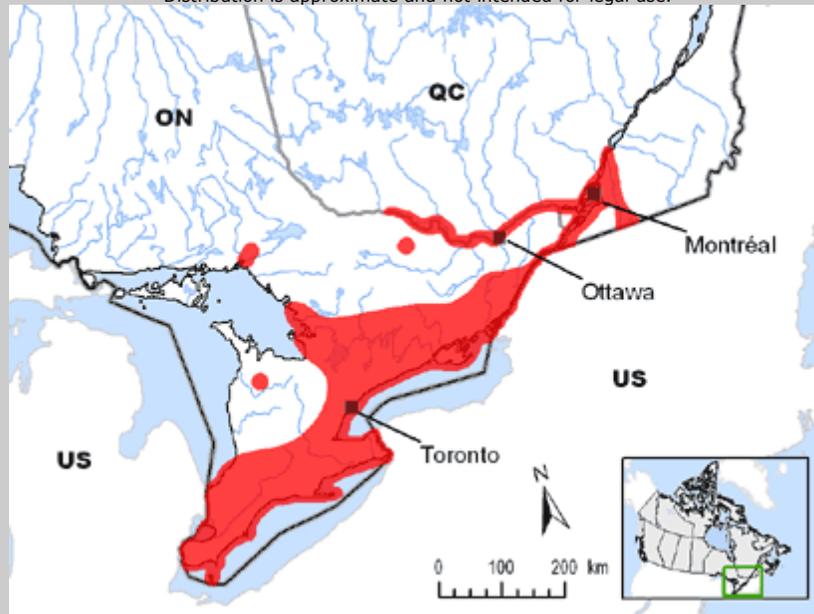


Description

The Northern Map Turtle is a highly aquatic, wary turtle, so it is often difficult to get a good look at it. The carapace (shell on the turtle's back) is olive to brownish in colour, with a net-like pattern of light yellow lines that fade as the turtle matures. When the species was first described, the markings were thought to resemble a geographical map, which gave rise to the turtle's common and scientific names. The head, neck, and limbs are a dark olive green with longitudinal greenish-yellow stripes and a roughly triangular spot behind each eye. Females are much larger than males, often weighing five times as much. The female's carapace may be more than 25 cm long, while the average carapace length for males is only 14 cm. Juveniles are similar to adults, but the shell is more round for the first one to two years of life.

Canadian Distribution of the Northern Map Turtle (shown in red)^{1,2}

Distribution is approximate and not intended for legal use.



¹Author: Canadian Wildlife Service, 2004

²Data Sources: The main source of information and data is the COSEWIC Status Report. In many cases additional data sources were used; a complete list will be available in the future.

Distribution and Population

The Northern Map Turtle occurs throughout the northeastern United States. It reaches its northern limit in southern Ontario and southwestern Quebec, where it is associated with the Great Lakes Basin and the St. Lawrence River. It is not known whether population levels are increasing, decreasing, or stable because there are no programs monitoring the status of the Northern Map Turtle in Canada. Estimates of 15 to 35 turtles per kilometre of shoreline have been made along the Ottawa River, and for localized Quebec populations (Lac des Deux Montagnes and Norway Bay).

Habitat

The Northern Map Turtle inhabits both lakes and rivers, showing a preference for slow moving currents, muddy bottoms, and abundant aquatic vegetation. These turtles need suitable basking sites (such as rocks and logs) and exposure to the sun for at least part of the day.

Biology

The Northern Map Turtle is an extremely wary species, diving into the water from basking sites at the slightest provocation. Individuals rarely leave the water except during nesting. They are nocturnal (active at night) to slightly crepuscular (active at dawn and dusk), remaining asleep in the sunshine for most of the day. They feed primarily on mussels, although they will occasionally eat other things. Hibernation is a communal activity, with turtles congregating in deep water areas

with a slow current. Mating occurs while turtles are still at the hibernating site (October to April). Sometime in June or July, females may move a considerable distance inland to lay their eggs in clutches of 10 to 16. The hatchlings emerge in late August or early September.

Threats

The Northern Map Turtle's distribution coincides with the most densely populated and industrialized areas of Ontario and Quebec. As a result, numerous factors threaten its survival. Loss of habitat and use of waterways for recreation are perhaps the greatest significant threats to this species. The control of water levels, particularly with dams, may adversely affect the turtles by submerging nesting sites and altering habitat. The diet of the Northern Map Turtle makes it vulnerable to accumulation of heavy metals and other toxins. Wildlife trade (for food or as pets) is an additional threat to this turtle, which resembles other highly desirable species.

Protection

The Northern Map Turtle is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

The Northern Map Turtle is a "specially protected" species under Ontario's *Fish and Wildlife Conservation Act*, which protects it from being hunted, trapped, held in captivity, or traded without a licence. The turtle has no legal status in Quebec, but its nests are protected from disturbance, destruction, or alteration by the *Act respecting the conservation and development of wildlife*; and the collection, keeping, and trade of individuals is prohibited by the *Animals in Captivity Regulation*.

Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name Recovery Strategy for Species at Risk in the Ausable River Ecosystem

Status Review/consultation complete

Number of Action Plans 0

Name National Recovery Strategy for Species at Risk in the Thames River Aquatic Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name National Recovery Strategy for the Walpole Island Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name Quebec's Recovery Plan for five turtle species (Wood Turtle, Northern Map Turtle, Blanding's Turtle, Stinkpot and Spotted Turtle)

Status Published by Jurisdiction

Number of Action Plans 0

Name Recovery Strategy for Species at Risk Turtles in Ontario

Status Recovery team/planner in place

Number of Action Plans 0

Name North American Monarch Conservation Plan

Status Preliminary draft received by leads

Number of Action Plans 0

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Recovery Progress and Activities

Summary of Progress to Date

This species is included within the Ausable River multi-species association.

In 2002 the Ausable River Recovery Team was formed to develop an ecosystem-based recovery strategy for the watershed. The team synthesized existing information on four factors: species at risk (population trends, habitat needs and limiting factors), land use, water quality, and stream channel structure. This overview of the river's health and threats provided a basis for the recovery strategy (draft available at www.abca.on.ca). The strategy identifies a high priority conservation zone, part of the watershed that contains the full range of all endangered and threatened species. It also recommends implementation of agricultural best management practices and improvements to wastewater treatment plants to reduce suspended sediment and nutrient loadings, which represent the most significant threats for the majority of species at risk.

Summary of Research/Monitoring Activities

Basin-wide surveys to assess the distribution of fish and mussel species at risk were conducted during the summer of 2002, resulting in the first records of Bigmouth Buffalo and Black Redhorse in the basin. Surveys of dragonflies, damselflies and reptiles along the Ausable River were conducted during July 2003. Additional surveys for fish, mussel, and reptiles were conducted in 2004 to help establish a more complete assessment of the current status of all aquatic species at risk in the basin. These surveys provide baseline data against which future population monitoring can be compared to track recovery progress.

Additional research is planned to inventory aquatic habitat and further clarify threats to species at risk. The goal is to assess the relative significance of identified threats and then implement mitigation measures.

Summary of Recovery Activities

The Ausable River Recovery Team has used several strategies to increase public awareness about species at risk in the river, including the distribution of brochures, installation of signs at local Conservation Areas and development of a website (see species at risk at www.abca.on.ca). Landowners have also received grants to complete stewardship activities that improve water quality and habitat for species at risk (e.g., excluding livestock from watercourses; planting buffer strip/riparian vegetation; modifying farm equipment to aid in efficient manure spreading, thereby reducing water pollution; and conservation tillage, which reduces soil erosion).

Because most of the land along the Ausable River is private farmland, landowner stewardship is critical to improving the health of the river and its species. The recovery team hopes to facilitate agricultural best management practices through more public outreach and landowner grants.

URLs

www.abca.on.ca (see species at risk)

Monarch

Scientific name:	<i>Danaus plexippus</i>
Taxonomic group:	Arthropods
Range:	BC AB SK MB ON QC NB PE NS
Status under SARA*:	Special Concern, on Schedule 1
Last COSEWIC** designation:	Special Concern (November 2001)

*SARA: The Species at Risk Act

**COSEWIC: The Committee on the Status of Endangered Wildlife in Canada



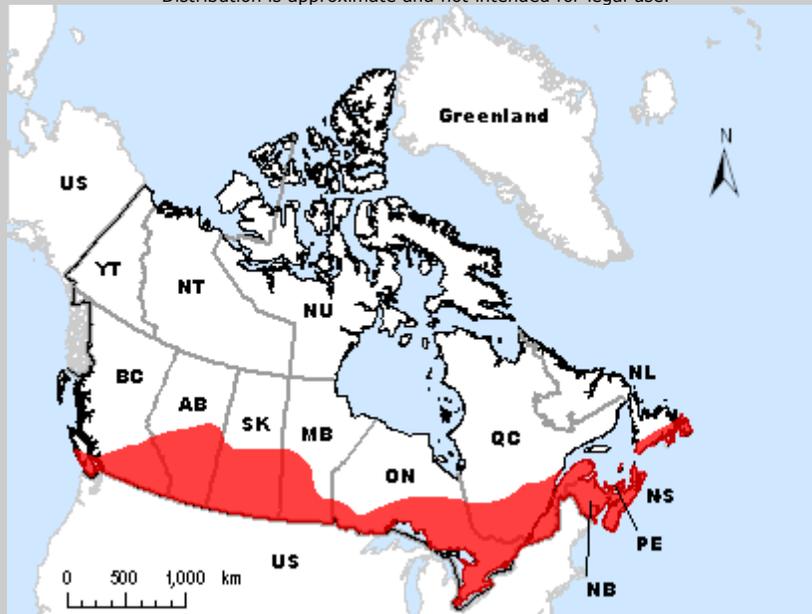
Photo/image: Bob Graham, Point Pelee National Park

Description

The adult Monarch is a bright orange butterfly with heavy black veins and a wide black border containing two rows of white spots. The wingspan is about 10 cm. Males can be distinguished from females by the presence of black coloured scent glands on each of their hind wings. Monarchs can be distinguished from the smaller but similar Viceroy by the absence of an inner margin of black on the hind wings. Monarch larvae or caterpillars are striped yellow, black and white; they grow to about 5 cm in length. The distinctive gold-green chrysalis suspends from a milkweed leaf or branch.

Canadian Distribution of the Monarch (shown in red)^{1,2}

Distribution is approximate and not intended for legal use.



¹Author: Canadian Wildlife Service, 2004

²Data Sources: The main source of information and data is the COSEWIC Status Report. In many cases additional data sources were used; a complete list will be available in the future.

Distribution and Population

The Monarch is widely distributed from Central America to southern Canada, and from coast to coast. There are three populations of the Monarch: western, central, and eastern. The western population includes all Monarchs found west of the Rocky Mountains to the Pacific Coast, from southwestern USA to southern Canada. The entire western population overwinters along the coast of California in Eucalyptus trees (native to Australia, brought to California in the 1850s). The central population occurs in Guatemala, El Salvador, Honduras, Belize, Nicaragua, Costa Rica, Panama, and southern Mexico. This population is relatively sedentary; the butterflies make short seasonal migrations and are reproductively active throughout the year (unlike the butterflies of the other two populations). The eastern population of the Monarch is the largest of the three, and includes all Monarchs that occur east of the Rocky Mountains, from the Gulf coast to southern Canada, and from the Great Plain States and Prairie Provinces east to the Atlantic coast. The entire population overwinters annually at approximately 12 sites in the Transverse Neovolcanic Belt, a mountain range in central Mexico. These sites are located within 800 km of each other and occur in the high-altitude Oyamel Fir forest. The Monarchs arrive at these sites between early November and late December, and form large aggregations of millions of butterflies. Generally, they remain inactive throughout the winter. The mass of butterflies breaks up in March and early April and the Monarchs begin their migration north. They fly to the Gulf Coast where the females lay eggs, and it is these offspring that continue the migration back to the northern breeding range. It takes several generations of butterflies to reach the northern part of the range, each generation responding to the availability of milkweed plants. Presently the eastern population numbers in the tens of millions, while the western population numbers in the millions. However, each population varies dramatically from year to year, depending on the climatic conditions.

Habitat

Monarchs in Canada exist primarily wherever milkweed (*Asclepius*) and wildflowers (such as Goldenrod, asters, and Purple Loosestrife) exist. This includes abandoned farmland, along roadsides, and other open spaces where these plants grow. Monarch wintering habitats include Eucalyptus trees along the Californian coast, and the Oyamel Fir forest in central Mexico. The distribution of the Monarch has gradually shifted eastward over the past century, due to a combination of clearing of deciduous forests in the eastern USA and southeastern Canada, and loss

of habitat to agricultural development in the Great Plains.

Biology

The eastern and western populations of the Monarch annually migrate south, beginning in August and continuing until mid-October. The butterflies actively seek nectar from wildflowers to increase their strength and build up a fat reserve that will maintain them throughout the winter and the early spring (when no nectar is available). Large aggregations of Monarchs may be seen in the fall along the north shores of Lakes Ontario and Erie, as they prepare to cross the open water. There are 2 or 3 generations of Monarchs from June to September each year. Development through the four stages of the life cycle (egg, larva, pupa, adult) may take between 20 and 45 days, depending on the weather conditions. A female may lay up to 400 eggs per fertilization. The pinhead-sized green eggs are laid one by one on leaves of various milkweed species, the primary food of the caterpillars that will hatch from the eggs after 3 to 12 days. When full-grown (which takes 9 to 18 days of serious chewing), the caterpillar attaches itself upside down to a milkweed leaf or branch, and forms a light green pupa. The adult butterfly emerges after a further 9 to 18 days. The adults have a 1:1 sex ratio. Monarch larvae store poison from the milkweed leaves they eat and pass it along to the adults, which makes the butterfly unpalatable and provides some protection against predation.

Threats

Environmental conditions and loss of breeding habitat pose threats to all Monarchs. However, there are population-specific threats as well. The eastern population of the Monarch is limited by loss of habitat to logging, human disturbance, and predation, especially while wintering in Mexico. Widespread and increasing use of herbicides in North America is another significant threat, which kills both the milkweed needed by the caterpillars and the nectar-producing wildflowers needed by the adults. Threats for the western population include real estate development along the Californian coast, which infringes on the wintering sites of the western population; programs to actively eliminate the Eucalyptus trees (an exotic species); and a protozoan disease.

Protection

The Monarch is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the [Species at Risk Act: A Guide](#).

The Monarch occurs in Point Pelee National Park in Ontario, where it is protected under the *Canada National Parks Act*. Point Pelee, as well as Long Point and Prince Edward Point, are designated as Monarch Butterfly Reserves.

Other Protection or Status

The Monarch Butterfly Conservation Program was created by the Mexican government to conserve wintering grounds for the species as well.

Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name National Recovery Strategy for the Walpole Island Ecosystem

Status Submitted for peer review/ review by F/P/T partners

Number of Action Plans 0

Name Canadian Management Plan for the Monarch

Status Recovery team/planner in place

Number of Action Plans 0

Name North American Monarch Conservation Plan

Status Preliminary draft received by leads

Number of Action Plans 0

Recovery Team

Canadian Management Team for the Monarch

Mary Rothfels - Chair - Environment Canada

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Donald Davis - Member - Conservation organization (NGO)

Jean Lauriault - Member - Museum

Walpole Island Ecosystem Recovery Team

Madeline Austen - Chair - Environment Canada

Phone: 416-739-4214 [Send Email](#)

Dean Jacobs - Chair - Other

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Recovery Progress and Activities

URL

Hinterland Who's Who: Monarch: http://www.hww.ca/hw_w2.asp?id=34

<http://www.hww.ca/hww2.asp?id=34>