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Species Profile

Loggerhead Shrike *excubitorides* subspecies

Scientific Name:	<i>Lanius ludovicianus excubitorides</i>
Other Names:	Loggerhead Shrike (Prairie population), Prairie Loggerhead Shrike
Taxonomy Group:	Birds
Range:	Alberta, Saskatchewan, Manitoba
Last COSEWIC Assessment:	May 2004
Last COSEWIC Designation:	Threatened
SARA Status:	Schedule 1, Threatened

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Taxonomy

The Loggerhead Shrike *excubitorides* subspecies was formerly named the Prairie Loggerhead Shrike or the Loggerhead Shrike (Prairie population).

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Description

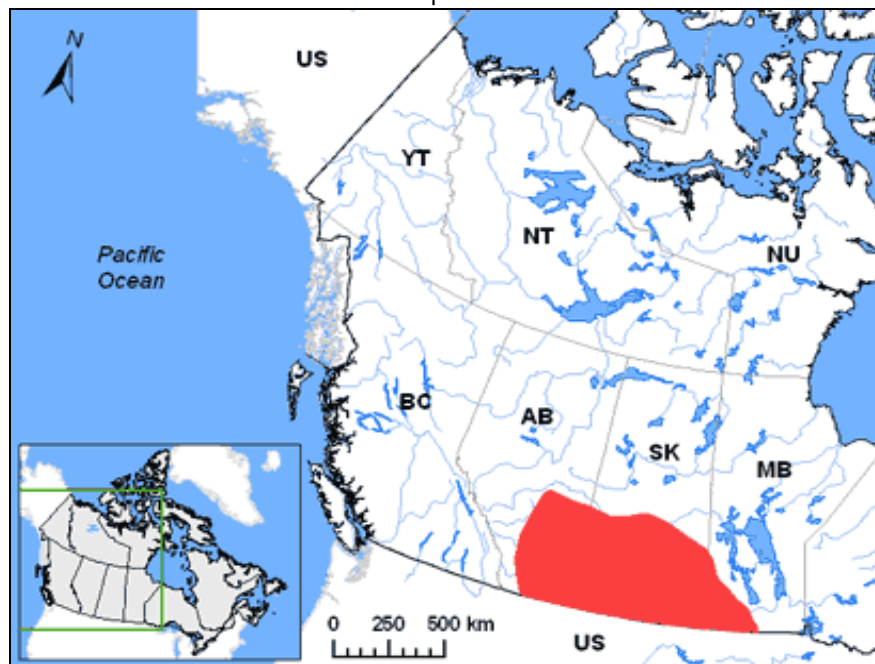
The Loggerhead Shrike, a songbird measuring approximately 21 cm in length, is slightly smaller than a robin. This bird's most striking feature is its black facial mask, which covers its eyes entirely. The mask extends above the eyes, where it is crowned by a narrow white strip and forms a thin line just above the base of the bill. Males and females are similar in appearance. With their contrasting black, white and grey plumage, adults are particularly conspicuous in flight. The top of the head, the back and the hind quarters are dark grey, while the lower body is whitish with stripes that are barely visible. The wings and long tail are mostly black and a clearly visible white line separates the back from the wings. Juveniles have a brownish plumage with greyish striping on the chest and belly. Like birds of prey such as falcons or hawks, Loggerhead Shrikes have a hooked bill, which is black in colour. The Loggerhead Shrike is an ambush predator that perches on treetops and wires. This species is known for its habit of impaling its prey on thorns or barbed wire. The call is a combination of melodious and harsh notes.

This bird is easily confused with the Great Grey Shrike, a highly similar related species. The Great Grey Shrike is slightly bigger (approximate length of 25 cm) and the base of its bill, which is longer and more curved, is slightly lighter. In addition, its facial mask does not extend above the eyes or to the top of the bill, and the striping on its chest is more conspicuous.

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Canadian Distribution of the Loggerhead Shrike *excubitorides* subspecies (shown in red) ^{1,2}

Distribution is approximate and not intended for legal use.



¹ Author: Canadian Wildlife Service, 2004

² Data 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.

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Distribution and Population

The Loggerhead Shrike inhabits a vast breeding range in North America. The *excubitorides* subspecies nests in central and southeast Alberta, central and southern Saskatchewan and southwest Manitoba; in the United States, it nests in Montana, Wyoming, eastern Colorado, eastern New Mexico, and Texas; and in Mexico, it nests in Sonora and northern Durango. The exact eastern and western boundaries of the range are not clearly defined, since this species seems to interbreed with the *gambeli* and *nevadensis* subspecies in the Rockies, and with the *migrans* subspecies in the Great Plains and the eastern Canadian Prairies (central and eastern Manitoba). It is believed that the wintering area is primarily in Mexico and in south-central United States (Oklahoma, Texas and Missouri). In the northern part of the range, including Canada, the species is migratory, whereas certain southern individuals in Texas and Oklahoma remain in the same area year-round.

The Loggerhead Shrike was once a common species in open habitats throughout most of the United States and southern Canada. Recent decades, however, have been marked by a sharp decline of Loggerhead Shrike populations. The *migrans* subspecies is currently endangered in Ontario and has largely disappeared from most of its former range in the northeastern United States. Although the *excubitorides* subspecies has been declining since the beginning of the 19th century, it has suffered significant declines of over 80% over the past 35 years. These declines have been linked to the loss of the natural pastures and grasslands that make up the species' habitat, as well as to pesticide residues. In Alberta, this subspecies once inhabited all of the grasslands and the Aspen Parkland region. In recent decades, however, the range has contracted southward and there have been fewer summer reports in the Aspen Parkland region. Today, the subspecies nests mainly in the northern half of the province's grasslands, east of Hanna and Brooks. However, recent surveys of east-central Alberta have produced a number of breeding records in the southern Aspen Parkland region east of Stettler. The Saskatchewan breeding range has also contracted southward. The species is still widely distributed in the Aspen Parkland region and grasslands, but it no longer nests in most areas of central Saskatchewan (Meadow Lake, Nipawin and Somme). In central Manitoba, the range of the *excubitorides* subspecies overlaps the range of the *migrans* subspecies, and hybridization occurs between these two subspecies.

The following populations have been reported in Canada: 118 individuals in Manitoba (2002), 14 000 to 15 000 individuals in Saskatchewan (1999), and 6000 individuals in Alberta (1999). The Manitoba populations are declining sharply, the Alberta populations appear to be stable and the trends in Saskatchewan remain unclear. Population trends are difficult to assess with any degree of accuracy because the surveys specifically targeting shrikes and the breeding bird surveys (BBSs) conducted continent-wide have produced different results. The surveys currently underway in Alberta and Saskatchewan should make it possible to get a clearer picture of the species' status and population trends in its main Canadian range. Potential problems, such as habitat loss or pesticide use in the known wintering ranges of the south-central United States, where populations have declined, have yet to be studied.

In addition to the population decline in Manitoba, a drop in the reproductive success rate has been observed in the province since 1993, which has been a contributing factor to the overall population collapse. While there are currently no long-term reproductive data for the Alberta and Saskatchewan shrike populations, this type of data is currently being gathered in Saskatchewan.

Recent attempts have been made to improve the nesting habitat, including planting shrubs in the grasslands and fencing off potential nesting trees. However, it is still too soon to assess the impact of these measures.

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Habitat

The Loggerhead Shrike *excubitorides* subspecies inhabits a wide variety of open habitats, including grasslands, sagebrush stands, pastures, agricultural areas and thinly wooded areas with small trees and shrubs where it can nest and forage. This shrike has a preference for small bushy trees and dense or thorny bushes. Its habitat choices are still poorly understood, as many apparently suitable sites are left unused.

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Biology

The Loggerhead Shrike *excubitorides* subspecies returns to its Canadian breeding areas from late April to early June. These birds begin to reproduce in their first spring. The parents apparently choose the nesting site and gather nesting materials together, although the female builds the nest on her own. Nests are generally built in shrubs or small bushy or thorny trees in open areas. Clutches are laid from late May to early July and this species raises a single brood. The female lays 1 egg per day, producing an average of 5 or 6 eggs, which she then incubates alone for 16 days. During the laying and incubation period, she is fed extensively by her partner. The nestlings are fed by both parents and the mother broods them for the first 4 or 5 days. On average, the nestling period lasts 17 to 18 days and the parents continue to feed their young during the post-fledging period until they learn to hunt on their own. Adults aggressively defend their eggs and nestlings against predators such as stray cats, raptors and carnivores in general. During the summer, the Loggerhead Shrike feeds primarily on large insects and occasionally on small birds, frogs and rodents. They are the only passerines that feed on small vertebrates, which they capture by swooping quickly down from an exposed perch. The Loggerhead Shrike uses its strongly hooked bill to kill its prey, which it often impales on thorns or other pointed objects. Family groups remain together for at least two weeks after fledging. Afterwards, these groups apparently dissolve, since the majority of birds are solitary during the migration to the south. Fall migration begins in August or September and the birds remain in their winter ranges until spring.

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Threats

Suitable habitats for breeding, migration and wintering have declined and continue to decline. Habitat loss is primarily due to the conversion of native grasslands to agricultural land and the

degradation of the remaining grasslands. Pesticides are one of the major factors that have contributed to population declines. Sharp declines of the Loggerhead Shrike *excubitorides* subspecies population have been shown to coincide with the period during which organochlorine pesticides were used in Canada and the United States, in part to combat grasshoppers, which are a key source of food for Loggerhead Shrikes nesting in the Prairie provinces. Since this bird is a predator at the top of the food chain, pesticides accumulate in its body every time it eats prey that has itself absorbed pesticides. These chemicals may be the cause of developmental delays in juveniles, the thinning of eggshells and smaller clutch sizes. Although organochlorines are no longer used, they remain in the environment and the effects of new pesticides are unknown. Moreover, the decline of the prey base related to the use of pesticides and habitat fragmentation may also be major factors. Collisions with automobiles are believed to be another major cause of mortality of both juvenile and adult Loggerhead Shrikes that build their nests and hunt near roadways. The predation rate on adults, eggs and nestlings also appears to be higher near roads and hedges, which attract predators. Finally, juvenile birds are also vulnerable to cold temperatures and heavy precipitation.

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Protection

Federal Protection

The Loggerhead Shrike *excubitorides* subspecies 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](#).

Under the terms of the *Migratory Birds Convention Act, 1994*, the Loggerhead Shrike benefits from international protection in Canada, Mexico and the United States.

In Canada, most of the suitable habitats for this species are on private land. Consequently, habitat protection must rely above all on voluntary land stewardship programs. This type of program promotes the installation of fences around small areas with shrubs or windbreaks, the protection of trees from livestock and the planting of trees or shrubs favoured by shrikes. There is, however, no data indicating the extent to which private landowners have implemented these measures.

Provincial and Territorial Protection

[To know if this species is protected by provincial or territorial laws, consult the provinces and territories websites.](#)

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Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name Loggerhead Shrike (*excubitorides* subspecies) Recovery Strategy

Status Review/consultation complete

Number of Action Plans 0

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Recovery Progress and Activities

Summary of Progress to Date

One recovery goal for the Loggerhead Shrike is to maintain and ultimately increase the network of private landholders, general public, government, non-government groups, and industry concerned with prairie conservation. Some landowners are already making changes in their land management

practices that minimize disruption of Loggerhead Shrike nesting and foraging habitat. These practices include adjusting cropping patterns, reducing or eliminating the use of pesticide inputs, and maintaining shrub nesting habitat. Alberta's Operation Grassland Community, initiated in 1991 to aid in the recovery of grassland species at risk, has achieved continued cooperation, trust, and commitment from over 300 landowners managing more than 190,000 ha of native grassland habitat. Saskatchewan's Shrubs for Shrikes, initiated in 2003, also develops stewardship programs with farmers and ranchers in order to maintain grassland foraging habitat and shrub nesting habitat.

Surveys are underway to better understand the distribution and abundance of Loggerhead Shrikes and their nesting habitat. This information is being used to develop population objectives and to identify critical habitat for the recovery of the species. Surveying and recovery activities focus on the two types of Loggerhead Shrike breeding habitat – natural grasslands with shrubs for nesting and the many artificial habitats of farmlands where shrikes nest in shelterbelts, active and abandoned farmyards, and remnant small grasslands.

Summary of Research/Monitoring Activities

Monitoring of Loggerhead Shrike numbers across the prairies is assessed by the international Breeding Bird Survey. This survey is carried out every five years and is designed to detect shrikes in the nesting season.

Detailed assessments of breeding effort, breeding success, and habitat use have been conducted in south-western Manitoba, south-central Saskatchewan, and south-eastern Alberta. These studies provide additional information on population trends and the factors that affect them.

Systematic roadside surveys have been conducted since 2003 to determine the distribution and relative abundance of Loggerhead Shrikes and their potential nesting habitat across prairie Canada. This has been complemented by assessments of Loggerhead Shrike populations and habitat potential in large natural grasslands.

Genetic and stable isotope technology is being used to determine genetic variation among Loggerhead Shrike populations, as well as to identify wintering areas for various breeding populations in prairie Canada.

Summary of Recovery Activities

In 1996-1997, the Loggerhead Shrike Trail was created in Alberta. Along this trail, existing nesting habitat is conserved and 300 thorny buffalo berry plants have been planted to create new habitat. Trees also are being planted in conjunction with Operation Grassland Community in Alberta to restore Loggerhead Shrike habitat.

Habitat enhancement work includes water supply improvement, fencing, habitat restoration, habitat maintenance, species monitoring, management plans, tree planting, and other activities to benefit wildlife in newly secured habitat areas. A non-technical Southern Headwaters at Risk stewardship handbook is being distributed to landowners and managers across the prairies to provide them with the tools and information to implement stewardship activities focused on species at risk, including the Loggerhead Shrike.

Stewardship education programs have been developed to increase the awareness of students and teachers to species at risk such as the Loggerhead Shrike. Teacher resource kits are made available to encourage further study.

URLs

Eastern Loggerhead Shrike Recovery:

<http://www.shrike.ca/>

Manitoba's Species at Risk: Loggerhead Shrike:

<http://www.gov.mb.ca/conservation/wildlife/managing/pdf/loggerhead.pdf>

MULTISAR:

sararegistry.gc.ca/.../speciesDetails_e.cf...

<http://www.multisar-milkriverbasin.com/Index.html>

Nature Saskatchewan: Shrubs for Shrikes:

http://www.naturesask.ca/stewardship_shrubs.php

Operation Grassland Community:

http://www.ogcsp.com/ogc/ogc_home.htm

Hinterland Who's Who: Loggerhead Shrike: <http://www.hww.ca/hww2.asp?pid=1&cid=7&id=52>

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Documents

[COSEWIC Status Reports](#) (1 record(s) found.)

[COSEWIC Assessments](#) (1 record(s) found.)

[Response Statements](#) (1 record(s) found.)

[Orders](#) (3 record(s) found.)

[Consultation Documents](#) (1 record(s) found.)

7 record(s) found.

COSEWIC Status Reports

[COSEWIC Status Report - Loggerhead Shrike](#) (2004)

English name: Loggerhead Shrike excubitorides subspecies, French name: Pie-grièche migratrice de la sous-espèce excubitorides Scientific name: Lanius ludovicianus excubitorides (Swainson). The Loggerhead Shrike excubitorides subspecies. (herea...

COSEWIC Assessments

[COSEWIC Assessment - Loggerhead Shrike](#) (2004)

This species was considered a single unit and assigned a status of Threatened in April 1986. Split according to subspecies in April 1991. The excubitorides subspecies retained the original Threatened designation from April 1986. Status re-examined...

Response Statements

[Response Statement - Loggerhead Shrike excubitorides subspecies \(*excubitorides*\)](#) (2004)

This raptorial songbird has suffered significant (more than 80 %) population declines over the past 35 years. These declines have been linked to loss of native prairie and pastureland habitats and pesticide residues....

Orders

[Order Acknowledging Receipt of the Assessments Done Pursuant to Subsection 23\(1\) of the Act](#) (2004)

The Order acknowledges receipt by the Governor in Council of the assessments of the status of wildlife species done pursuant to subsection 23(1) of the Species at Risk Act (SARA) by the Committee on the Status of Endangered Wildlife in Canada (COSEWI...

[Order Amending Schedules 1 to 3 to the Species at Risk Act](#) (2005)

The Minister of the Environment is recommending, pursuant to section 27 of the Species at Risk Act (SARA), that 43 species be added to Schedule 1, the List of Wildlife Species at Risk. This recommendation is based on scientific assessments by the Com...

[Order Extending the Time for the Assessment of the Status of Wildlife Species](#) (2006)

The time provided for the assessment of the status of the wildlife species set out in the schedule is extended for 3 years from the day on which section 14 of the Species at Risk Act comes into force....

Consultation Documents

[Consultation on Amending the List of Species under the Species at Risk Act: November 2004](#) (2004)

05/09/2010

Species

The Government of Canada proclaimed the Species at Risk Act (SARA) on June 5, 2003 as part of its strategy for the protection of wildlife species at risk. Attached to the Act is Schedule 1, the list of the species that receive protection under SARA, ...

Date Modified: 01/11/2010