

Migratory Birds in Saskatchewan and Nicaragua

By: Peter Friedrichsen

Migratory birds across North and South America are a striking feature of seasonal change, but they are facing growing threats

to their survival due to habitat loss and related impacts of climate change. Every fall and every spring, the skies fill with migratory birds that travel hundreds and thousands of kilometres annually between their breeding and wintering grounds across countries and continents. Some birds, such as the Arctic tern, can travel 40,000km all the way from the Arctic Circle down to Argentina in South America! However, habitat disturbance and loss, climate change, pollution and other habitat concerns have drastically changed what birds we are seeing year over year.

From 1970 to 2016, Canada's shorebird population has declined by "40%, with long-distance migrants declining more steeply (52% decrease)

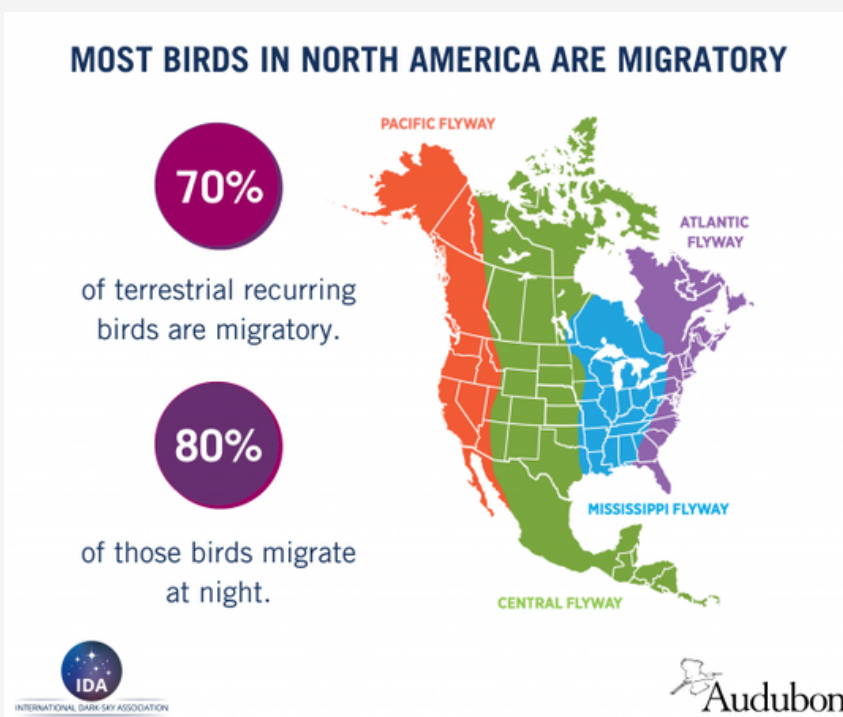
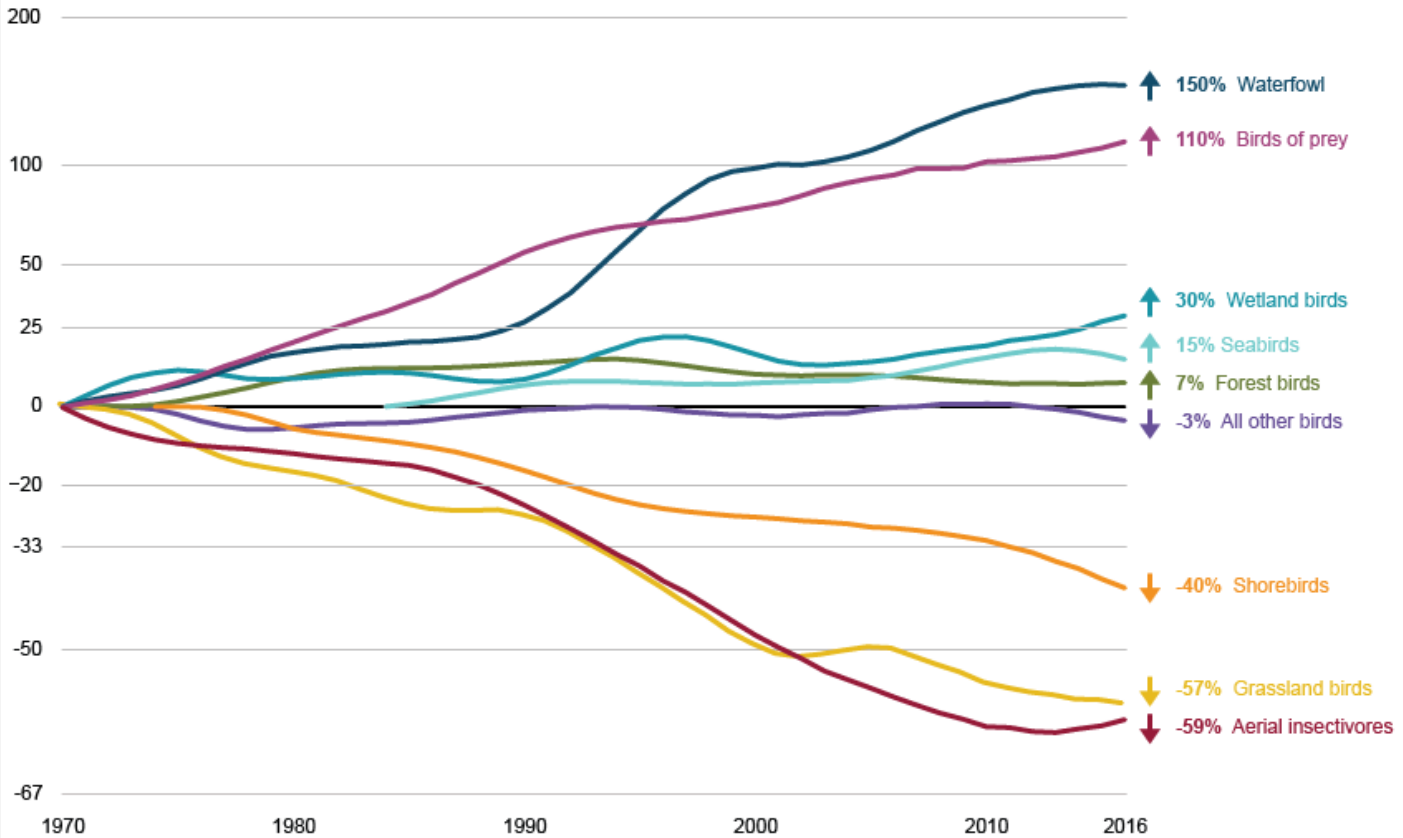


Figure 1: Migratory bird flyways in North America

than short-distance migrants (23% decrease)" (ECCC 2019). In contrast, the number of waterfowl (ducks), birds of prey (hawks) and wetland birds have increased (Figure 2). These changes are attributed to population replacement, where migratory birds that are no longer coming back to their breeding grounds opens up space for species that do not travel as far. Sadly, 90 bird species are "at risk" and **3 have already gone extinct** (NCC 2021).

Figure 2: Average percentage change of bird populations in Canada 1970-2016

Average percentage change since 1970



www.canada.ca/environmental-indicators

Fortunately, many individuals and organizations across North and South America are working together to monitor these migratory birds and their habitat as they travel seasonally across the continents. In Canada, lands and waters are also designated as Migratory Bird Sanctuaries (MBS) to protect key habitat along their migration routes. Some of these sanctuaries are UNESCO Biosphere Reserves, such as Long Point in Ontario where over 500,000 birds were seen in a donut formation as they feed before they migrate south for the winter.

"Canada's shorebird population has declined by
↓ 40%
from 1976 to 2016"
(ECCC 2019)



Redberry Lake Biosphere Reserve & Migratory Bird Sanctuary (MBS)

Saskatchewan is host to a UNESCO Biosphere and MBS: Redberry Lake Biosphere Reserve, which lies about

2 hours' drive northwest of Saskatoon. It was initially designated an MBS in 1925, with 5,271km² of protected area (Figure 2), but has been an ecologically and culturally important site for Indigenous peoples for centuries, including nêhiyawak (Plains Cree), anishinaabeg (Ojibwe) and nakoda oyadebi (Assiniboine) First Peoples. Today, Mistwasis Nêhiyawak and Muskeg Lake Cree Nation consider it part of their traditional territory and work closely with the Biosphere.



Fun fact:
the Arctic Tern
can migrate
over 40,000km!

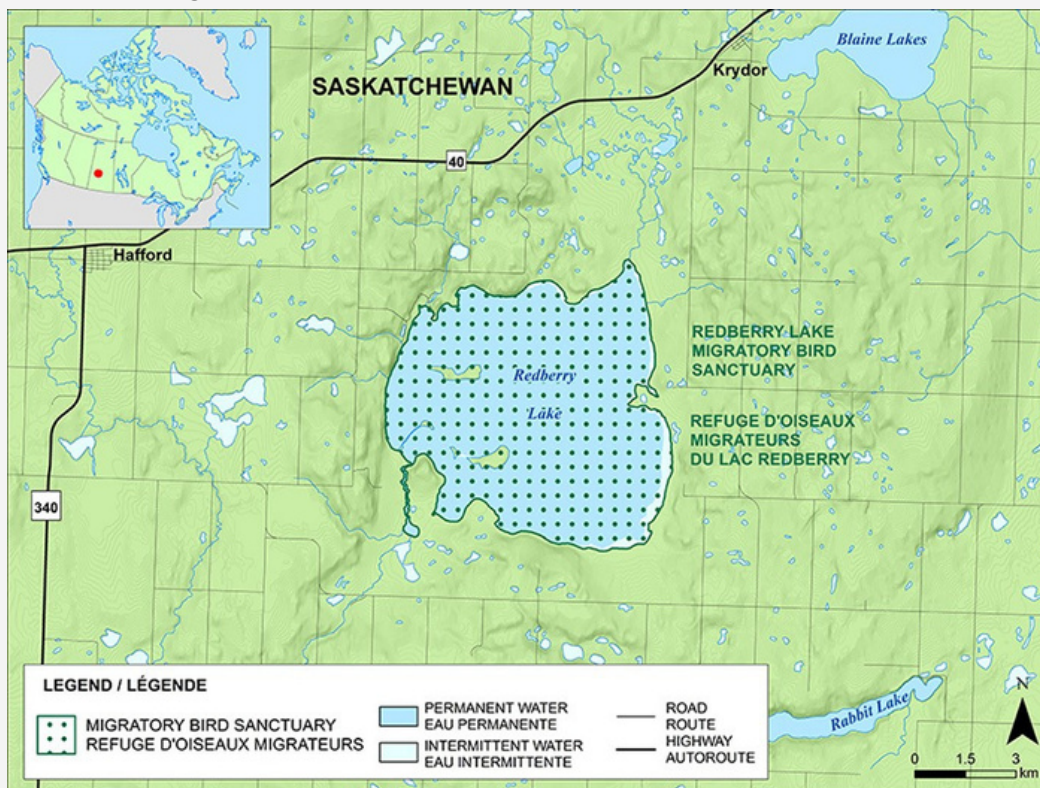


Figure 3: Redberry Lake Migratory Bird Sanctuary (ECCC 2019)

Migratory birds use the North American summer for breeding and feeding as an explosion of food appears once the ice melts and the weather warms. In the fall, they migrate south to warmer areas in Central and South America and the Caribbean, only to return over the spring and begin the cycle again. This means that these birds also require protected habitat and migration corridors as they make their annual journey.

One example of migratory bird habitat conservation is the BOSAWAS Biosphere Reserve (Figure 4), including 15% of Nicaragua and named after the River Bocay, Cerro Saslaya and River Waspuk. This area is home to the Indigenous Miskito and Mayanas peoples, but despite the conservation designation in 1998, it has faced significant deforestation from migrant ranchers settling in the region. Between 1987 and 2012, the region has lost 35% of its forested area and faces continued disturbance and forest loss today.

BOSAWAS Biosphere Reserve - Nicaragua

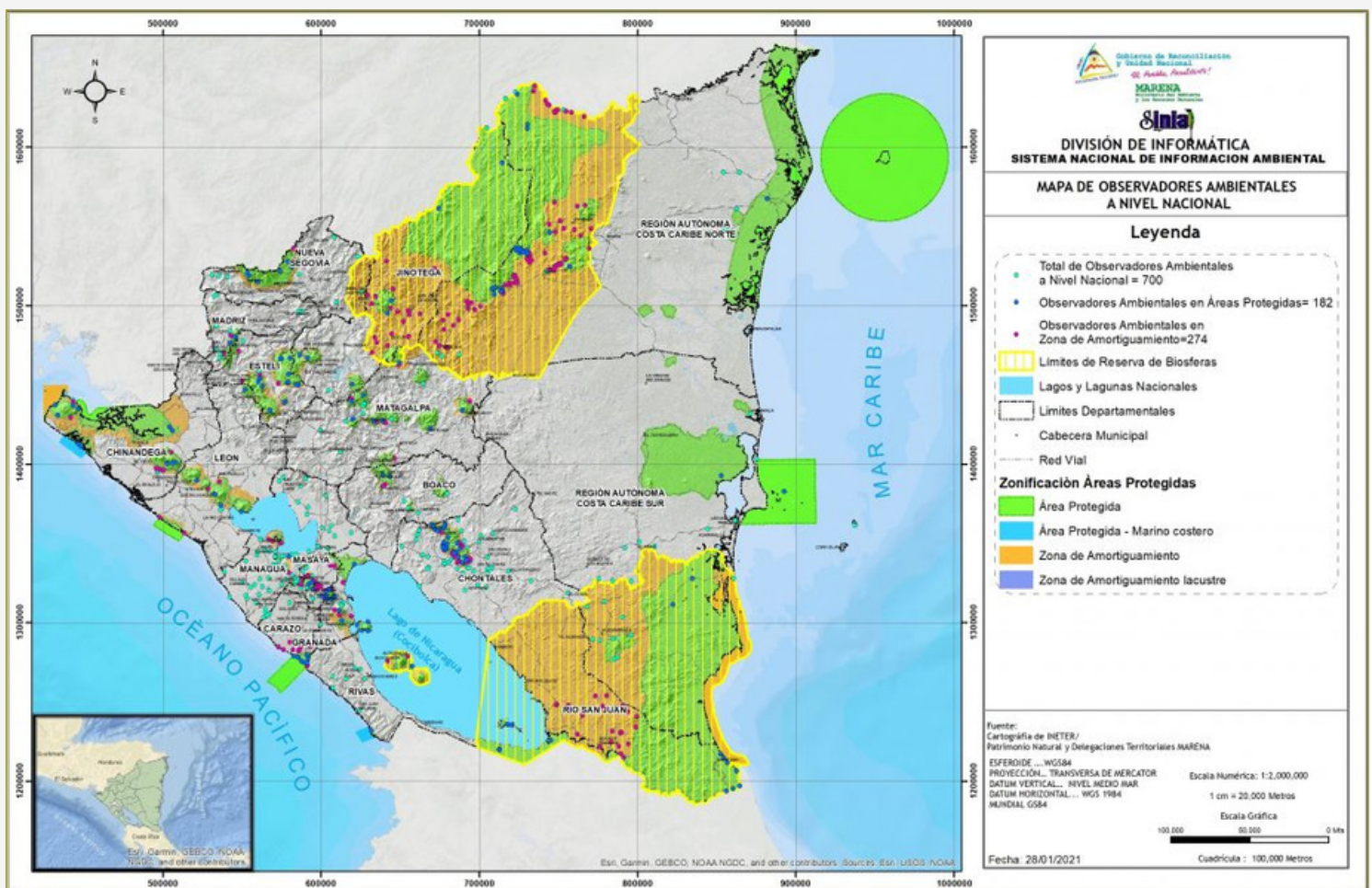


Figure 4: Protected areas in Nicaragua, including the BOSAWAS in the North (ENDE-REDD+ 2018)

The loss of this key protected area is extremely concerning, and is one piece contributing to the declining numbers of migratory birds in Canada. The key issue to be aware of is that habitat destruction and loss anywhere along the migration route leads to overall population decline. Even though Canada has protected Migratory Bird Sanctuaries, multiple bird populations will continue to decline without enhanced protection of the BOSAWAS in Nicaragua.

Local Knowledge: Global Goals

Fortunately, organizations such as **Change For Children** have been hard at work in the BOSAWAS supporting forest preservation with Indigenous communities in the region through their project: **Local Knowledge: Global Goals**. Specifically, they are empowering Indigenous girls and women to engage in “land defense leadership, land management, and lobbying” activities. Girls and other youth are learning traditional and local knowledge (TLK) from Elders and how to apply it with SMART Conservation Software and MAPEO. These efforts are critical to protecting the ecological integrity of the BOSAWAS region, and ensuring its sustainability for future generations of Indigenous youth and their communities. The project is funded through the Fund for Innovation and Transformation (FIT), supported by Global Affairs Canada and the Inter-Council Network.



Project Pillars:

- Sustainability
- Self-sufficiency
- Improved governance
- Gender equality



Photos courtesy of
Change For Children,
2022



Bird spotlight:

Purple Martin *progne subis*



The Purple Martin (Figures 5 and 6) is a recognizable migratory bird that is one of the first spring arrivals to their breeding grounds in the boreal parkland of western Canada, southern Ontario and Eastern United States. From there, they migrate down through Central America and the Caribbean until they stop in South America before returning north the following spring (Figure 7). They are not a species at risk in Canada, but they often compete with the non-native European Starling for habitat and Brown-Headed Cowbird, which takes over the nests of other birds.



Fig. 5 and 6: Migrating purple Martins in Nicaragua, June 2022 (Source: Kevin Kardynal, ECCC)

Bird spotlight:

Purple Martin

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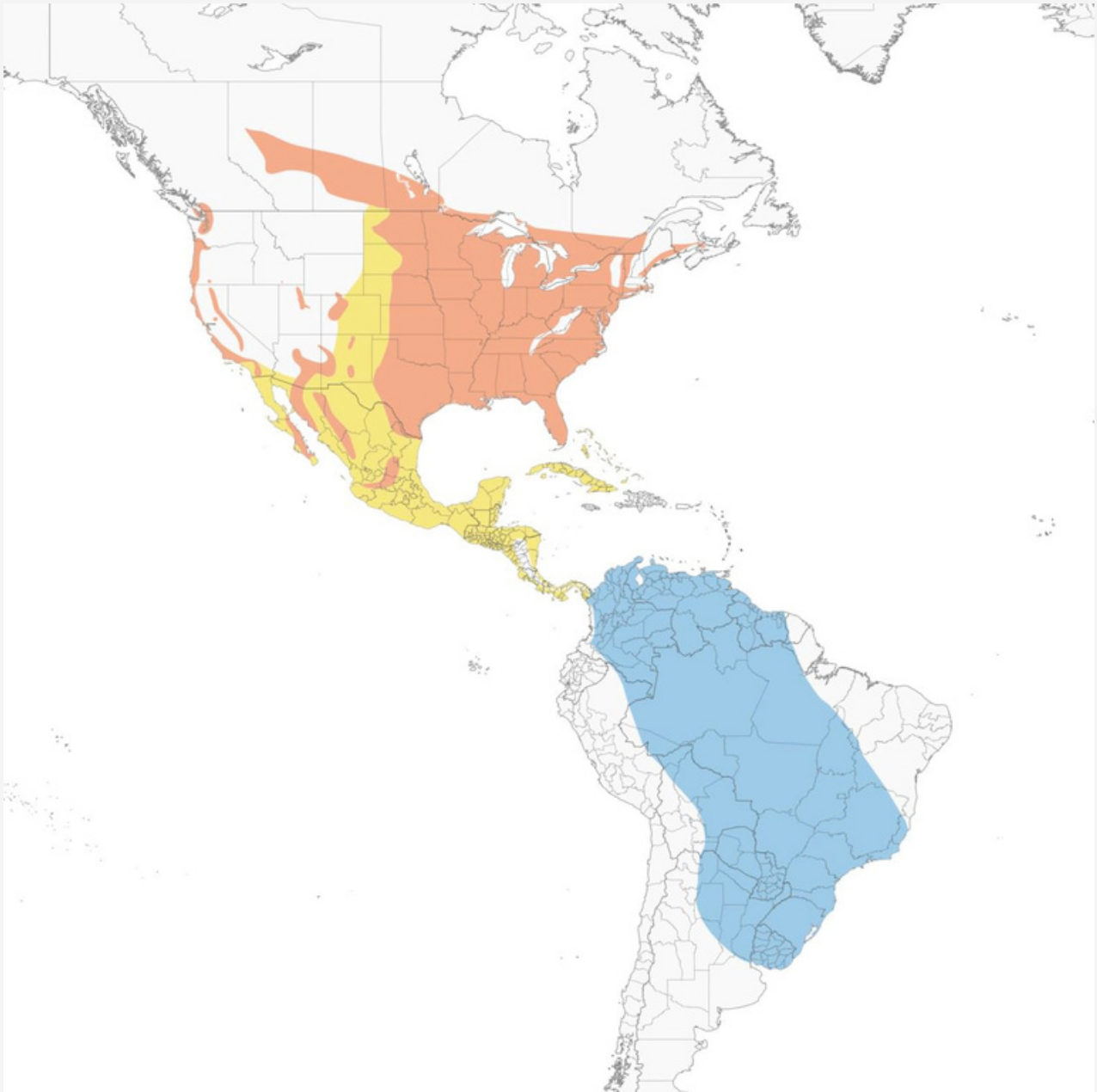


Figure 7: Migration route of the purple martin (Cornell University 2022)

How can you help protect migratory birds?

Multiple international organizations are working together to protect critical habitat for migratory birds, but they need your help! Some ways you can get involved are:

Reporting bird sightings

- Apps on your phone or regional birding organizations
i.e. All About Birds – Cornell Lab

Support Migratory Bird Sanctuaries

- Visit migratory bird sanctuaries near you!
i.e. Redberry Lake

Donate to organizations in Canada and internationally

- Support organizations working with communities in the BOSAWAS
(i.e. Change for Children)
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You can also share your encounters with migratory birds internationally using hashtags on social media, including **#migratorybirds** **#birdlovers** **#pajarosmigratorios** including the date and location that you spotted the bird. We are facing a trans-national challenge because birds don't see borders. We need to recognize that our decisions related to development, conservation, management and adaptation are **not confined to our own backyards**. We must link across borders to address the problems faced by migratory birds and the places we share with them. Migratory birds are a powerful medium for connecting individuals, communities and nations to **collaborate and share ideas** across borders, and keep our skies full with birds.

Sources

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