

2020 ANNUAL REPORT

Taylor's checkerspot butterfly
Euphydryas editha taylori
Endangered in Canada



Canada's last defence
for endangered species
wildlife preservation.ca





Wildlife Preservation Canada exists to save species from extinction through hands-on action.

For a growing number of Canadian species at risk, habitat protection alone is no longer enough.

Wildlife Preservation Canada's mission is to save animal species at risk from extinction in Canada by providing direct, immediate, hands-on care. We specialize in science-based techniques such as conservation breeding and releases, headstarting, and translocation to restore wild populations and recover species.

WPC are the only organization in Canada to provide this critical need for wildlife in recovery efforts across the country. Our Conservation Action Plan is based on the urgency of the need and is updated annually.

WPC works in collaboration with appointed recovery teams and other organizations. Our partners include federal and provincial ministries and parks, First Nations, land trusts, charities and private landowners, conservation breeding institutions, universities and colleges, and local grassroots volunteer groups. Our role varies to suit the situation. In most cases we take a leading coordinating role. In others, we are a supporting partner. In all, our sole mission is to save species from disappearing from Canada.

WPC also builds Canada's conservation capacity by providing young scientists the opportunity to gain hands-on experience working on endangered species recovery programs. Canada's New Noah program has been developing conservation leaders across Canada for the past 30 years.

WPC field technician Pourya Sardari releasing conservation bred Oregon spotted frog tadpoles back into their native habitat in the Fraser River valley.



Photo: R. Mumme

MESSAGE FROM OUR PRESIDENT

Last year, I wrote about how the simple backyard delights of a song sparrow, swallowtail butterfly, or ant-mimicking spider helped me stay connected with nature while I was working from home. This past year, as many of us have struggled with pandemic life, the creatures around us have gone about their daily lives with a biological inevitability that shines with hope. Last fall, painted turtles snuggled into the mud under frozen-over ponds and lakes, newly mated bumble bee queens retreated underground to their tiny burrows to hibernate, and monarch butterflies somehow flitted thousands of kilometres to forests in central Mexico.

The animals under our care were busy too. In 2020, Wildlife Preservation Canada released nearly 2000 captive-reared Oregon spotted frog tadpoles and froglets and 800 captive-bred Taylor's checkerspot caterpillars at historic sites for these species in British Columbia. Hundreds of painted turtle eggs were rescued from an almost certain demise and the "head-started" young will soon be released back to the wild.

Some work was delayed but WPC biologists pivoted to plan major new projects and create new conservation leadership partnerships across Canada.

We co-launched the Canadian Species Initiative which will adapt globally established tools and best practices to bring Canadian conservation stakeholders together to streamline endangered species recovery under a One Plan Approach. WPC led the formation of an Ontario Turtle Conservation Working Group and we worked with partners to plan for the upcoming reintroduction of Massasauga rattlesnakes and mottled duskywing butterflies, development of a new conservation breeding lab for rearing bumble bees and identifying conservation priorities for Canada's last population of blue racer.

It is remarkable that in such an uncertain year that Wildlife Preservation Canada expanded our conservation impact. This is testament to our staff, partners, and supporters, and our steadfast commitment and passion for saving the species we care for from extinction.

Dr. Bridget Stutchbury
Professor of Biology, York University
President, Wildlife Preservation Canada

NATIVE POLLINATOR INITIATIVE



Yellow-banded bumble bee
(*Bombus terricola*)
Status: Special Concern

90% of flowering plants rely on insects for pollination. 1 in every 3 bites of the food we eat is thanks to the activity of pollinators.

Bumble bees in particular are some of the world’s most efficient pollinators. The ability to perform buzz pollination sets them apart. By vibrating large flight muscles when on a flower, bumble bees access trapped pollen for transfer to other plants nearby. Crops such as tomatoes and blueberries produce much higher yields when pollinated by bumble bees.

1/3 of Canada’s bumble bees are declining. Species like rusty-patched and yellow-banded bumble bees have undergone widespread, rapid declines and are now listed in Canada as being at risk of extinction.

WPC’s Native Pollinator Initiative identifies factors causing declines and develops techniques for recovery focused on research, monitoring, outreach, citizen science, and breeding. It is a multi-species effort to save Canada’s pollinators from extinction.

Program Partners

- | | |
|--|---------------------------------|
| African Lion Safari | The Rogers Foundation |
| Alberta Conservation Association | The Schad Foundation |
| Bishop’s University | The Xerces Society |
| Kitigan Zibi Anishinabeg of the Algonquin First Nation | York University |
| Ontario Parks, Pinery Provincial Park | University of California, Davis |
| Parks Canada, Rouge National Urban Park | University of Guelph |
| Royal Saskatchewan Museum | University of Toronto |
| Science North | Scarborough |
| | US Department of Agriculture |
| | US Fish and Wildlife Service |

Bumble bees

To operate safely, WPC decided to cancel provincewide bumble bee surveys and queen collection for the conservation breeding program in 2020 - activities which required travel in the early spring. We focused instead on research, outreach, and the community science bumble bee monitoring program in Pinery Provincial Park – one of Canada’s most important sites for bee conservation.

We found alternate ways to lead development of bumble bee conservation breeding methods. WPC biologists were key participants at a workshop in the U.S resulting in the first ever report by the International Union for the Conservation of Nature on conservation breeding tools for recovery of an endangered bumble bee – the rusty-patched bumble bee. WPC led the writing of a manual compiling best practices for bumble bee conservation breeding, to be published in 2021. Plans were created for a transportable, self-contained bee lab to be trialed in 2021. Once we have established this initial lab we envision replication at sites across Ontario as an innovative method for restoring declining bumble bee populations.

WPC supported research into threats facing bumble bees, including assessing the value of artificial nest boxes for conservation; identifying conservation priority areas for bumble bees across Canada under future climate scenarios; evaluating community scientists and trained dogs in locating bee nests; bumble bee abundance and diversity along land use gradients in Ontario; and, identifying pollen samples important for foraging bees. The results of these studies will have direct applications for bumble bee conservation.

Community science efforts were focused on a single site, maintaining our longest running monitoring program at Pinery Provincial Park. Volunteers completed 208 survey hours and submitted 440 bumble bee records to Bumble Bee Watch. Pinery is the last place that the rusty-patched bumble bee was recorded in Canada and is a critical site for other species. Outreach focused on school and children’s camp virtual presentations with the bumble bee team producing a 7-part series of entertaining and educational online videos on bumble bee conservation. 🐝

Photo: Jessica Steiner



OUR IMPACT

“Insects are crucial for the pollination of Canada’s crops and wildflowers. Unfortunately, insect pollinators are in decline, including about a third of Canada’s bumble bees. Two bumble bee species have not been seen here in over a decade and may never be found in Canada again. It is critical that we work together towards the goal of saving Canada’s native bumble bees.”
- Sarah MacKell, Lead Biologist

440
bumble bee records submitted by community scientists at Pinery Provincial Park in Ontario.

1st
IUCN report published on the potential for conservation breeding to contribute to the recovery of an endangered bumble bee species.



Taylor's checkerspot butterfly
(*Euphydryas editha taylori*)
Status: Endangered in Canada

NATIVE POLLINATOR INITIATIVE

Taylor's checkerspot butterfly

In 2020, the Taylor's checkerspot butterfly recovery program in British Columbia focused on ongoing conservation breeding in combination with field surveys, landowner engagement, habitat stewardship, public outreach, and the ground-breaking first release of captive bred checkerspots to Hornby Island. WPC worked collaboratively with partners on the Taylor's checkerspot butterfly Recovery Implementation Group – a dynamic network of conservation partners from government, the Garry Oak Ecosystem Recovery Team, the Denman Island Conservancy Association, the Greater Vancouver Zoo, and private contractors and landowners.

Surveys on Vancouver Island and Denman Island showed that Taylor's checkerspots were using the two known sites on those islands. On Denman Island, surveys discovered that some previously unknown suitable habitat on private lands was also being used by checkerspots. Biologists also began searching for new wild populations in promising habitat on Vancouver Island. Although no additional sites were confirmed in 2020, field surveys were hampered by reduced travel to follow provincial restrictions during the pandemic.

Despite all its challenges, 2020 was the most successful season on record for the Taylor's checkerspot butterfly recovery program!

WPC participated in a historic release of 786 conservation bred caterpillars in Helliwell Provincial Park on Hornby Island. Upon returning later in the season we observed adult checkerspot butterflies at those release sites, for the first time in over 20 years.

An additional record-setting 1353 young were produced during the 2020 breeding season and overwintered at the conservation facility for release in 2021.

Survival of captive animals was high, with the largest challenge in 2020 being low productivity among adults. We continued to trial new methods and update husbandry protocols throughout the year. Breeding and release will continue with releases for the foreseeable future on Hornby Island until this new Taylor's checkerspot population becomes established. 🌱

The Taylor's checkerspot butterfly is found in Canada only in BC's Garry oak meadow habitat, and its presence is considered to be an indicator of a healthy ecosystem. Conservation of this species and its habitat will benefit other threatened species that rely on Garry oak meadow for survival.

Prior to 2018, only a single population of Taylor's checkerspot butterfly remained in Canada, on Denman Island in BC. Conservation breeding and release, population monitoring, and collaboration with partners overseeing habitat protection and restoration has resulted in Taylor's checkerspot butterflies now being found at two additional sites in BC, on Helliwell and Vancouver Islands.

Our recovery program for the Taylor's checkerspot butterfly challenged the team to pioneer techniques in breeding and release for butterflies - an approach highlighted in the recovery strategy for this and other butterflies in Canada.

Program Partners

- | | |
|---|--|
| B.C. Ministry of Environment and Climate Change Strategy | Recovery Team |
| B.C. Ministry of Forests, Lands, Natural Resources Operations and Rural Development | Hornby Island Community Members |
| B.C. Parks | K'ómoks First Nation |
| Denman Conservancy Association | Greater Vancouver Zoo |
| Denman Island Community Members | Taylor's Checkerspot Butterfly Recovery Implementation Group |
| Garry Oak Ecosystems | Taylor's Checkerspot Community Working Group |
| | The Rogers Foundation |
| | University of British Columbia |

OUR IMPACT

1,353

Taylor's checkerspots reared in captivity for release into the wild in 2021.

1st

adult checkerspot butterflies observed on Hornby Island in more than 20 years due to our hands-on interventions.

In spring of 2020, we released 786 caterpillars at Helliwell Provincial Park on Hornby Island, the first release of conservation-bred young on the island. This work is groundbreaking in the field of insect conservation, and inches the species away from the edge of extinction. Our breeding and release program achieves impressive results year over year because we are pioneering methods and investing in developing knowledge to achieve success.

- Michelle Polley,
Endangered Species Technician

Photo: Chris Junck



FRASER VALLEY WETLANDS

Oregon spotted frog

British Columbia's freshwater ecosystems are being impacted by a range of human activity including habitat destruction, pollution, climate change, and invasive species. WPC's Fraser Valley Wetlands recovery program aims to restore the diversity and functionality of wetlands by protecting biodiversity and ensuring that species like the Oregon spotted frog do not disappear from these ecosystems.

The Oregon spotted frog recovery strategy calls for conservation breeding, headstarting, and release to re-establish wild populations in restored wetlands.

In 2020 we cared for 30 male and 40 female Oregon spotted frogs at our conservation breeding facility. In April, we released 1458 tadpoles and an additional 475 young frogs in September, a near-record year for the release program. An additional 200 young frogs were kept back over the winter to allow them to continue to grow and increase in size prior to being released in 2021.

Our recovery team partners carry out ongoing field monitoring to track the survival of the frogs that we release, along with the wild-born individuals. This year they provided the exciting news that breeding at the reintroduction site by wild frogs was increasing, with 8 egg masses found at the release site this spring. Wild populations are re-establishing as a direct result of our conservation effort.

The recovery program for the Oregon spotted frog continued to benefit from strong collaboration across governments, First Nations, non-governmental charities, land stewards, universities, conservation breeding facilities, and private individuals, demonstrating how positive impacts result from positive partnerships.

We have the capacity to produce significantly more tadpoles, but we need to continue to study fertility and egg viability issues within our captive breeding population. Low fertility in frog conservation breeding programs is not unique and there are similar projects around the world that we can learn from. Sharing knowledge across global networks is an important part of developing successful species recovery programs and will be an important part of our work in 2021. 🌱



Oregon spotted frog
(*Rana pretiosa*)
Status: Endangered in Canada

Decades of intensive agricultural and suburban development in the lower mainland of BC has had a devastating impact on wetlands, now on the verge of collapse. At least one freshwater species, the pacific pond turtle, has disappeared from BC.

The Oregon spotted frog uses these at-risk wetland habitats exclusively. The Oregon spotted frog is now endangered in Canada, requiring immediate hands-on action to survive.

Conservation breeding, headstarting, and release are core activities used by WPC to restore Oregon spotted frogs to historic sites throughout the Fraser River valley while partners are protecting and improving wetland habitat. It is a model partnership - recovering species and habitats works hand in hand for the benefit of all species depending on these habitats for survival.

Techniques we are using to save the Oregon spotted frog will be used to save other species here in Canada in the future.

Program Partners

- | | |
|---|---------------------------------|
| B.C. Conservation Foundation | Greater Vancouver Zoo |
| B.C. Ministry of Environment and Climate Change Strategy | Kwantlen First Nation |
| B.C. Ministry of Forests, Lands, Natural Resources Operations and Rural Development | Leq'a:mel First Nation |
| Calgary Zoo | Metro Vancouver Parks |
| Canadian Oregon Spotted Frog Recovery Team | Precious Frog |
| Fraser Valley Conservancy | Seabird Island First Nation |
| | Simon Fraser University |
| | The Sitka Foundation |
| | Toronto Zoo |
| | University of the Fraser Valley |
| | Vancouver Aquarium |

OUR IMPACT

1933

Oregon spotted frog tadpoles released back into the wild.

8

egg masses found at the Chaplin reintroduction site - a sign that the population is recovering.

Every member of the Oregon spotted frog recovery team is excited to report that wild produced frog egg masses were observed at our restored release site at Chaplin this year, definitive evidence of the population re-establishing in the wild. This success has provided WPC and our partners extra motivation to continue working together to save the Oregon spotted frog here in BC.
- Andrea Gielens, Lead Biologist





“It was a record season across the board in our western painted turtle program, protecting nests and releasing turtles at seven sites throughout the pacific coastal region of BC with evidence of increasing numbers of wild females and nests confirming that our hard work is bringing these wild populations back from the brink.”
~ Andrea Gielens, Lead Biologist

OUR IMPACT

256
western painted
turtle hatchlings in
the headstarting
program.

59
wild turtle nests
monitored and
protected in the
Fraser Valley.

FRASER VALLEY WETLANDS

Western painted turtle

British Columbia’s freshwater ecosystems are being damaged by habitat loss, pollution, climate change, and invasive species. WPC’s Fraser Valley Wetlands recovery program aims to increase functionality of wetland habitats by restoring biodiversity. One of our focal species is the western painted turtle, BC’s only remaining freshwater turtle.

For most turtles, parental care ends after egg laying. This leaves defenceless eggs and hatchlings at high risk of predation. Our team steps in to protect animals like the western painted turtle during this fragile time. For an endangered species, every additional aid that we can provide to bolster their populations, while we deal with the larger issues leading to their decline, is critical.

WPC collects eggs from threatened turtle nests in sites where they would otherwise not survive. We incubate the eggs and care for the hatchlings until they reach a specific weight of 30 grams. This is the size where they have an increased chance of survival, being too large for hungry invasive bullfrogs. We then release them to protected wetlands. This technique is called headstarting. In 2020 we released 146 hatchlings that had reached that magic weight, a record number for the program.

Our work does not just take place in the breeding facility. We carry out annual monitoring to track survival of released turtles and evaluate the impact of the program on restoring populations. Increased support from donors in 2020 enabled us to hire seasonal staff to focus entirely on turtle nest monitoring.

Field monitoring found a record number of turtle nests at the protected nesting sites in 2020, confirming that wild western painted turtle populations are recovering as a direct result of our conservation effort. We monitored 120 wild females and protected a record number of 59 nests, collecting 355 eggs for headstarting. The hatchlings are thriving and will be cared for until release in 2021.

The recovery program for the western painted turtle benefits from collaboration across governments, First Nations, non-governmental charities, land stewards, universities, conservation breeding facilities, and private individuals - demonstrating how positive impacts result from positive partnerships. 🌿

Photo: Stephanie Winton



Western painted turtle
(*Chrysemys picta bellii*)
Status: Endangered on the Pacific Coast of Canada

Turtles across Canada are disappearing due to wetland loss, and fragmentation leading to high levels of road mortality. All turtle species in Canada are now threatened.

The western painted turtle is BC’s only remaining freshwater turtle.

The recovery program calls for hands-on conservation including population augmentation. WPC has been working with partners to save eggs from endangered nests and headstarting young turtles in captivity, until they are older and better able to survive in the wild, when they are released.

This is done in tandem with partners working on habitat restoration, population monitoring, and threat assessment. Our shared goal is to increase turtle populations and establish new ones.

Restored populations are stable and thriving.

The recovery program for the western painted turtle is a catalyst for saving wetlands in the Fraser River valley, which in turn benefits all the other species that depend on these wetlands for survival.

Program Partners

- | | |
|---|---|
| B.C. Conservation Foundation | Leq’a:mel First Nation |
| B.C. Ministry of Environment and Climate Change Strategy | Metro Vancouver Parks |
| B.C. Ministry of Forests, Lands, Natural Resources Operations and Rural Development | Private landowners of Nicomen Slough and Murchie lake |
| Coastal Painted Turtle Project | Seabird Island First Nation |
| Fraser Valley Conservancy | The Sitka Foundation |
| Greater Vancouver Zoo | Toronto Zoo |
| Kwantlen First Nation | University of the Fraser Valley |
| | Vancouver Island University |
| | Western Painted Turtle Recovery Team |





EASTERN LOGGERHEAD SHRIKE



Eastern loggerhead shrike
(*Lanius ludovicianus alvarensis*)
Status: Endangered in Canada

Although songbirds, shrikes are impressive predators. While mainly insectivores, they can easily tackle snakes, frogs, mice, and even small birds. Lacking talons, they impale their prey on thorns while they remove bite-size pieces.

Loggerhead shrikes are among the first migratory songbirds to return to Canada's grasslands in the spring; pairs begin nesting in April.

WPC coordinates the recovery efforts for the eastern loggerhead shrike – a comprehensive conservation program with partnerships across North America – carrying out habitat surveys and protection, wild population monitoring, conservation breeding and release of juvenile shrikes, landowner outreach, and public education.

Program Partners

African Lion Safari	Nashville Zoo at Grassmere
BluEarth Renewables	The National Aviary
Canadian Association of Zoos and Aquariums	The Nature Conservancy of Canada
Canadian Wildlife Health Cooperative	The North American Loggerhead Shrike Working Group
Carden Forum	Ontario Ministry of Environment, Conservation and Parks
Carolina Raptor Centre	Ontario Parks
Couchiching Conservancy	Ontario Veterinary College
Environment & Climate Change Canada – Canadian Wildlife Service	Queen's University
Granby Zoo	ReNew Zoo
Helen McRea Peacock Foundation at the Toronto Foundation	Smithsonian Conservation Biology Institute – National Zoo
Hodgson Family Foundation	Takla Foundation
Kingston Solar LP	The Toronto Zoo
K.M. Hunter Charitable Fund	Trent University
Laurentian University	Western University
Little Ray's Reptile Zoo and Nature Centre	York University
Napanee Plains Joint Initiative	

Loggerhead shrikes were once a common sight in grasslands across southern Ontario, but their numbers have dropped steadily since the 1960s. They would have disappeared entirely from Canada if not for conservation action. Habitat loss, here and on their southern overwintering sites, has reduced numbers to the point where they are just hanging on.

The goal of WPC's recovery program is to re-establish a self-sustaining wild population of shrikes in Canada. Our hands-on breeding and release activities are achieving this by adding new birds to the population each year - an integral part of a wider set of conservation actions coordinated by WPC and our partners that also includes habitat protection, population monitoring, research, landowner outreach, and education.

Saving the loggerhead shrike in eastern Canada requires at least 35 nesting pairs across three separate sites. Our team monitored 16 wild pairs in 2020 (11 in Napanee, 4 in Carden, 1 in Smiths Falls), which produced 41 fledglings - although this low count could have been influenced by restricted fieldwork and travel during the pandemic.

Conservation-bred birds comprised 24% of the wild population. Pairings with at least one conservation-origin bird contributed to 29% of this year's wild fledglings. This highlights the importance of the breeding and release program in maintaining the wild population. We are encouraged that our release methods are producing healthy birds who survive, migrate, and then return to breed in the wild.

Breeding facility partners produced 23 fledglings. Most were retained to bolster the captive population, and one of these was hand-reared to serve as an outreach ambassador. Seven young were released at Carden to augment the wild population.

A significant discovery was made this past season. A shrike that had been born in captivity at the Nashville Zoo was brought north and released by WPC in Ontario in 2019. This amazing individual migrated south for the winter and returned to nest in Ontario in 2020, representing a **global first for migratory songbird conservation**. This observation has important encouraging ramifications for the shrike recovery program, as well as other migratory songbird conservation programs, and is a major clue to solving the biological mystery of migration. 🌿



“Despite the year's challenges, the eastern loggerhead shrike recovery program developed new conservation breeding partnerships, discovered critical information about migration and threats facing shrikes, and safely monitored and maintained wild populations. As always, our work was aided immensely by the dedicated network of partners that share WPC's passion for this unique songbird. Together we will save this species and its grassland habitat in Canada.
~ Hazel Wheeler, Lead Biologist

OUR IMPACT

24%
of the wild population in Ontario were conservation-bred shrikes released by WPC.

1st
record of a migratory songbird returning to nest at a release site in Canada after having been born in captivity in the southern U.S.



Eastern massasauga rattlesnake
Photo: Eric Jolin

OJIBWAY PRAIRIE REPTILES



Eastern massasauga rattlesnake
(*Sistrurus catenatus*)
Status: Endangered in the Carolinian Zone of southwestern Ontario

The Ojibway Prairie has been home to a small population of eastern massasauga rattlesnakes. These and other at-risk reptiles are threatened by residential development, habitat fragmentation, and road mortality.

The eastern massasauga is shy and relies on camouflage to avoid human contact. Their distinctive rattle is used to warn other animals and people away. Rattlesnake bites are uncommon and avoidable when these snakes are respected and given a wide berth.

Massasauga habitat includes tallgrass prairies, peat lands, shoreline habitats, wetlands, barrens, and coniferous forests. The massasaugas in the Windsor-LaSalle region of Ontario are the only population in Canada that lives in tallgrass prairie.

Unfortunately, their range has plummeted by 95% over the last 40 years, and the Ojibway population will now require re-introduction to survive. Fortunately, the WPC team at Ojibway has been enhancing, protecting, and restoring habitat and developing snake release techniques and are prepared to reintroduce this species.

Program Partners

8 Trees Inc.	Ontario Parks
City of Windsor	Pirol Construction Ltd.
Environment and Climate Change Canada	ReNew Zoo
Essex Region Conservation Authority	Scales Nature Park / Georgian Bay Turtle Hospital
Hydro One / Infrastructure Ontario	The Nature Conservancy of Canada
Laurentian University	The Toronto Zoo
Ojibway Nature Centre	Town of LaSalle
Ontario Ministry of Environment, Conservation and Parks	University of Guelph
Ontario Ministry of Natural Resources and Forestry	University of Windsor
	Wildlands League

The Ojibway Prairie Complex and Greater Park Ecosystem's unique population of eastern massasauga rattlesnakes have declined precipitously over the last 40 years. Its disappearance from the area would be a significant blow to the distribution and ecological and genetic diversity of this species.

To achieve our goal of restoring massasaugas, while providing benefits to other threatened species within the Ojibway Prairie, we are monitoring the population, restoring habitat, reducing threats like road mortality, and preparing for snake reintroductions.

In 2020, the team continued habitat restoration and enhanced 13.5 ha of critical habitat by removing 185 kg of invasive plants and 180 kg of garbage, and created woody debris sites favored by snakes and other wildlife. WPC helped protect 5 km of corridor linking habitat and installed 305 m of barrier fencing to prevent road mortality and intentional killing by preventing snake dispersal into residential areas. We have advocated, and will continue to do so, for seasonal road closures, like those used elsewhere to protect reptiles, and continue to install wildlife crossings at hotspots.

Although we spent more than 562 hours surveying the area, sadly, we found no massasaugas, which likely means this population has disappeared.

Reintroductions are now a necessity, and we have made preparations. In partnership with Laurentian University, we tested novel release techniques at artificial hibernation sites using common eastern gartersnakes as a surrogate species. A major step was increasing the capacity of the conservation breeding program by collecting 15 wild massasaugas from other sites to produce young snakes for reintroduction to Ojibway. Once granted permission, we will be ready to carry out Canada's first snake reintroduction to bring the massasauga back from the brink in Ontario's Ojibway Prairie. 🐍



OUR IMPACT

562

hours of fieldwork conducting 325 surveys for rattlesnakes and other at-risk species.

560

meters of barrier fencing monitored and maintained to prevent snake road mortality.

2020 marks the first year when no massasaugas were found at the Ojibway Prairie despite intensive spring and summer surveys. This was heartbreaking but highlighted that the need for population augmentation using conservation-bred snakes is now greater than ever. After key advancements were made to reduce threats, enhance habitat, and identify release sites, we are now ready to prepare to return massasaugas to the Ojibway Prairie.
~ Jonathan Choquette, Lead Biologist



Canada's New Noah program is a unique opportunity provided each year to a young Canadian conservation biologist.

The Durrell Conservation Academy is the global leader in providing training in endangered species conservation. The New Noah's journey begins with a three-month course at the Academy in the U.K. where the Noah receives a Degree in Endangered Species Management.

New Noahs then spend six months on the island nation of Mauritius working with the Mauritian Wildlife Foundation, a world-renowned conservation organization saving some of the world's rarest species.

The New Noah brings back skills to apply to their own conservation career, and knowledge to manage recovery programs for endangered species here in Canada. There is no other program in the world that offers this type of experience for young Canadians dedicated to saving endangered species.

Program Partners

Alan & Patricia Koval Foundation
Durrell Wildlife Conservation Trust
Mauritian Wildlife Foundation

CANADA'S 31st NEW NOAH

Stephanie Winton was chosen as this year's Canada's New Noah, the 31st young biologist awarded this opportunity. Although Stephanie's travel has been postponed to 2021, we were so impressed by Stephanie that we hired her to help our Canadian Species Initiative while she waits to begin her New Noah journey.

Stephanie's love for wildlife was evident from an early age. In her own words "I have always thought that I stumbled upon conservation biology, but it is clear that I was destined to help animals. There were hints along the way; catching frogs in my aunt's garden, days at the lake watching turtle hatchlings, and wearing out Jane Goodall's books through constant reading."

An undergraduate course at the University of British Columbia led to a major in zoology. In her final semester of undergrad study Stephanie participated in a field studies program in Africa. "This life-changing opportunity introduced me to new cultures, scientists working in challenging conditions, and perspectives on conservation that are not common in Canada."

"My first job was surveying for northern leopard frogs in the rolling foothills of my home province of Alberta. I then helped with a black-footed ferret reintroduction and black-tailed prairie dog monitoring program in Saskatchewan. Spotting an elusive frog in the cattails or the eyeshine of a ferret peeking out of a burrow were moments that left a lasting impression and deepened my passion for wildlife."

Stephanie's MSc thesis studied the road impacts on western rattlesnakes. "Roadkill is a major threat to wildlife. My analysis highlighted the severity of roads on rattlesnakes, informed policy, and led to installation of eco-passages to reduce mortality. I was fortunate to see my results applied and honoured to receive a Governor General's Academic Gold Medal in recognition of this work."

Stephanie is keen to learn more about the practical aspects of conservation as Canada's New Noah. "I am excited to be working with people at the forefront of species recovery. Having studied animals that could be lost unless we act, this is a field that is near and dear to me." 🌿



OUR IMPACT

31

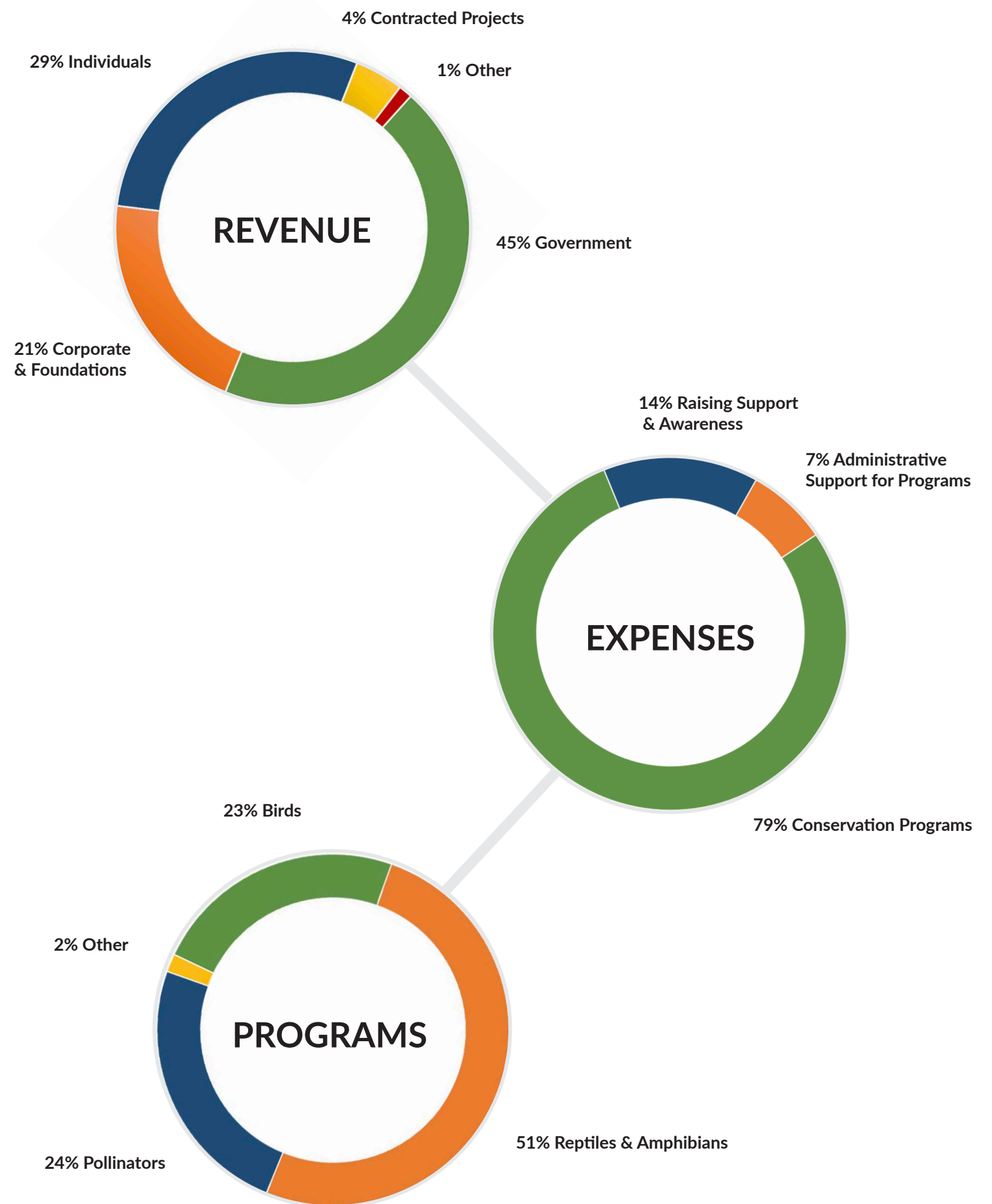
years of the New Noah program – Canada's longest running and most comprehensive training program for endangered species conservation.

I am excited to learn from experienced and inspiring people and organizations at the forefront of endangered species recovery. Having worked with species like the western rattlesnake, black-footed ferret, and burrowing owl, animals that could soon be lost unless we take action, I want to learn as much as I possibly can to save species like these from extinction.
~ Stephanie Winton, 2020 New Noah

FINANCIAL HIGHLIGHTS

WPC's donors and financial partners provided steadfast and loyal support, above and beyond, during a challenging year. Together, we were able to strengthen our core species recovery programs and even expand our conservation impact with the addition of new species and programs – all of which would not have been possible without that support

- Lance Woolaver Jr., Executive Director



THANK YOU

Saving Canada's species at risk is a monumental task.

Wildlife Preservation Canada believes that our success cannot be achieved without strong partnerships and generous funding. We want to thank all our corporate, foundation, and individual donors who believe in our work and are willing to invest in the future survival of Canada's wildlife.

Corporate & Foundation Donors

Alberta Conservation Association	K.M. Hunter Charitable Fund
Aldergrove Credit Union	Kingston Solar LP
BluEarth Renewables	The Boiler Inspection and Insurance Company of Canada
BC Conservation Foundation	The Kathleen, Mary & Walter Barron Family Foundation
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Couchiching Conservancy	McIndless Family Foundation
David Charitable Trust	Nashville Zoo at Grassmere
Don and Hazel Williams Foundation	Scales Nature Park
The Grant MacEwan Nature Protection Fund at the Calgary Foundation	Takla Foundation
Hallward Fund at the Toronto Foundation	The Rogers Foundation
Helen McRea Peacock Foundation at the Toronto Foundation	The Schad Foundation
Hodgson Family Foundation	The Sitka Foundation
Humble Bee	The Westaway Charitable Foundation
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Thank you to those who donated through payroll deductions. Your combined donations make for a significant contribution.

Wildlife Guardians are a special group of dedicated individuals who support our work through recurring monthly donations. Wildlife Guardians make it possible for our conservation teams to help endangered animals throughout the year by providing steady funding.

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NEW SPECIES FOR 2020



CANADIAN SPECIES INITIATIVE canadianspeciesinitiative.ca

WPC co-launched the Canadian Species Initiative (CSI) to facilitate the participation of all potential stakeholders within species recovery planning in Canada, bringing together partners such as NGO's, First Nations, government, zoos and land users to ensure that all recovery tools (wild and captive) are considered during the development of species recovery programs here in Canada. In 2020, CSI was recognized as a Regional Resource Centre for the International Union for the Conservation of Nature's Conservation Planning Specialist Group.



Photo: Jessica Linton

MOTTLED DUSKYWING *Erynnis martialis*

As a key member of the Ontario Butterfly Species at Risk Recovery Team, WPC is working to restore the mottled duskywing butterfly by protecting habitat and reintroducing conservation-bred duskywings to Pinery Provincial Park in 2021. WPC will be evaluating the success of reintroduction methods by monitoring following releases. This will be Ontario's very first butterfly reintroduction.

Thanks to strong collaborations with a network of valued partners and support from loyal donors we have been able to begin new programs to save even more species, from the diminutive mottled duskywing butterfly to the iconic woodland caribou.



Photo: Jeff Hathaway

BLUE RACER, *Coluber constrictor foxii*

Wildlife Preservation Canada is part of a multi-partner collaboration protecting Canada's last remaining population of blue racer, one of the fastest and most beautiful snakes in North America - as well as one of the rarest in Canada, found only on Pelee Island in southern Ontario. Our focus is on determining the genetic uniqueness of the Pelee population while researching habitat use and the size and range of the racer population on Pelee to guide future conservation.



BUTLER'S GARTERSNAKE *Thamnophis butleri*

WPC resurveyed historical sites in southern Ontario for Butler's gartersnake to identify population declines. Although 150 snakes of five different species were recorded during these surveys, only nine Butler's gartersnakes were located across 18 sites. This information is critical to recover Butler's gartersnake in Canada.



Photo: Christina Davy

ONTARIO TURTLE CONSERVATION WORKING GROUP

WPC led the formation of an Ontario Turtle Conservation Working Group to bring together expertise in hands-on management to recover Ontario turtles. We have been coordinating the writing of *Ontario Turtle Best Management Practices - Nests to Hatchlings* to provide guidelines for conservation practitioners working with turtles in Ontario.



Photo: Parks Canada

WOODLAND CARIBOU *Rangifer tarandus caribou*

WPC is developing partnerships with key organizations and stakeholders involved with the conservation of woodland caribou in BC and Alberta to determine how best to leverage WPC's expertise with endangered species reintroductions to help save declining populations of this iconic Canadian animal. More to come in 2021!

Art: Heather Wodhams



Wildlife Preservation Canada has been providing wildflower seed grants to restore and create critical pollinator habitat from coast to coast across Canada since 2017. We awarded 8 more seed grants in 2020, bringing the total number of awards given to date to 22.

Seed grants have been provided to create pollinator meadows and gardens with community groups, conservation authorities, municipalities, parks, land trusts, charities, schools, and private individuals across the country.

The winning applicants submitted stewardship plans that were well-researched and demonstrated a long-term commitment to pollinator conservation. Most of all, they have all shown a strong desire to prevent their local at-risk native pollinators from disappearing.

The wildflower seed grants program has been generously supported by The Printing House Charitable Office, Burt's Bees Canada, and Bonterra Organic Wines.

Conservation continues with your help

Please consider supporting our efforts today as we work together toward a brighter future.

Donate securely online. You can make a safe and secure online donation using your credit card. You can donate to our general fund or you can donate to our fundraising campaigns, which direct funding to specific areas. wildlifepreservation.ca/donate

Become a monthly donor. As a Wildlife Guardian, you are part of a special group of dedicated individuals who make it possible for our conservation teams to help endangered animals throughout the year. wildlifepreservation.ca/wildlifeguardians

Donate by phone or mail. If you would like to make a credit card donation over the phone, give us a call at 1-800-956-6608. We answer our phones Monday-Thursday from 9am-3pm. If you would like to send us a cash or cheque donation, please send by mail to:

Wildlife Preservation Canada
5420 Highway 6 North
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- Thank you for your generous support!

FORGING AHEAD BY LEADING THE WAY

What a year 2020 has been, not just for Wildlife Preservation Canada but for the entire planet. In addition to the challenge of restructuring our field work so that WPC could continue saving species safely, we all found ourselves more aware of the importance of nature and wildlife in our daily lives. Working from home, my own backyard became a haven and I have been amazed at how many species shared this space with me that I had previously not been aware of. This affirmation of the importance of nature to our wellbeing has strengthened WPC's resolve to be Canada's last defence for endangered species.

Despite challenges, 2020 was a significant year for WPC. Steadfast support from our core, loyal donors provided us with the flexibility to invest in our core programs and expand our conservation impact with new species.

2020 was a banner year for all three programs in BC. We released Oregon spotted frogs and western painted turtles in record numbers to the Fraser River valley. Field monitoring recorded an increased number of frog egg masses and turtle nests, **confirming that wild populations are re-establishing as a direct result of our conservation effort.** We released Taylor's checkerspot caterpillars to a completely new site on Hornby Island. Upon returning later in the season we observed adult checkerspot butterflies at those release sites, for the **first time in over 20 years.**

Eastern loggerhead shrikes released by WPC in previous years were once again significant contributors to the breeding population. A shrike born in captivity at the Nashville Zoo was transported here and released by WPC in Ontario in 2019. This amazing individual then migrated south for the winter and returned to nest in Ontario in 2020, representing a **global first for migratory songbird conservation.**



WPC's native pollinator team strengthened our model citizen science program in Pinery Provincial Park, enabling volunteers to contribute to bumble bee conservation at one of the most important sites for Canada's most vulnerable species. WPC's pollinator team also developed partnerships throughout the year for the reintroduction of conservation bred mottled duskywings in 2021. **This will be Ontario's very first butterfly reintroduction project.**

In 2020 WPC led a collaboration to protect Canada's last remaining population of the blue racer, one of the fastest and most beautiful snakes in North America. We also carried out a population census for Butler's gartersnake in southern Ontario to identify population declines. The development of innovative methods for reintroducing temperate snakes at the Ojibway Prairie brought us that much closer to restoring the region's unique population of eastern massasauga rattlesnake.

I would like to take this opportunity to thank WPC's supporters, staff, board of directors, and volunteers for their dedication and contributions - above and beyond - during the past year. Our ability to expand conservation efforts during a year of unprecedented challenge is something we should all be proud of. I am honoured to be part of the organization that is at the leading edge of endangered species conservation in Canada.

Dr. Lance Woolaver, Jr.
Executive Director

*The most wonderful, beautiful things
in life are the simple things which
we have all forgotten.*

- Gerald Durrell
Founder, Wildlife Preservation Canada



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for endangered species**
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