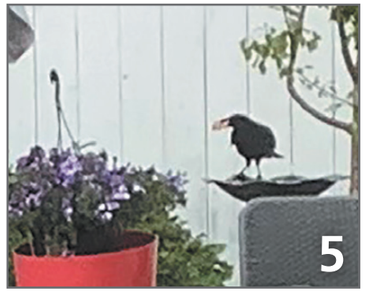
FALL 2021 VOLUME 79.3

BLUE JAY



Robert D. Loewen of Regina shares his backyard observations of American Crows dunking food in water prior to consumption.

Gordon S. Hammell describes changes to American Avocet numbers in response to rapid flooding followed by human-caused water level lowering on a large wetland southeast of Erickson, MB.

Over the past 20 years, David J. Larson has casually observed cat-tails near Maple Creek, SK. A summary of some of the observations is provided, as well as some thoughts on the position and significance of cat-tails in wetland ecosystems.

From 2009 to 2015, the Wascana Centre Authority banded Canada geese that were captured in Regina's Wascana Park. In the spring of 2020, nine volunteers were enlisted to record resightings of banded geese in Regina and, primarily, Wascana Park. Ryan J. Fisher shares the results, as well as information about the geese that were resighted.

With the passing of Prince Philip on April 9, 2021, many are reminiscing on the Duke of Edinburgh's visit to Saskatchewan in 1987 and his impact on conservation efforts in the province. See pages 20, 24, and 26 for articles related to the Prince's visit and contributions.

In this issue's edition of Human Nature, Elaine Ehman discusses how Nature Regina's native plant garden at the Royal Saskatchewan Museum has become not only an oasis of natural beauty, but a refuge of friendship and living wonder.

WHAT'S INSIDE

FROM THE PRESIDENT

Ken Ludwig
President, Nature Saskatchewan
k.ludwig@sasktel.net

It is with humility that I begin my turn as president of Nature Saskatchewan. I hope to serve the society in this role at least a fraction as well as it has been served by past presidents, as we continue to pursue our common interest and our common work.

Conservation is at the heart of why Nature Saskatchewan exists. In sharing a common interest in — and concern for — our natural world, we are working to ensure that the natural spaces and species in our province will be here into the future, for their own sake and for the enjoyment of our future generations.

ON THE FRONT COVER
A decrepit outhouse in an abandoned farmyard near Ernfold, SK became the favourite perch for this great horned owlette.
Photo credit: Randy McCulloch.

ON THE BACK COVER
American White Pelicans photographed at Last Mountain Lake in June 2021.
Photo credit: Daniel Bushman.

There are of course many challenges to, and pressures on, our natural world, from the effects of global climate change, to fragmentation and loss of habitat brought by encroachments of urban growth, agriculture, resort development, mining and even some recreational activities, to the introduction of damaging invasive species, to contamination of the vital air and water. As a result, we have natural, undisturbed areas dwindling, and many species of flora and fauna threatened.

Because of these many challenges, we are called even beyond our conservation stewardship programs to be a voice for nature, to advocate on its behalf, to speak where nature cannot speak for itself, with public and private decision makers and our community as a whole. Our grasslands and forests, our wetlands and rivers, our songbirds and wildflowers alike, not to mention our own future generations, deserve no less.

We understand that advocacy is not about criticizing government, per se, or engaging in partisan politics. It is about promoting the value of nature; advising, encouraging and recognizing those efforts — policies, decisions, actions — that help to protect and preserve our natural world, be they by public officials, private interests or general public; and challenging decisions, developments and actions which threaten it.

The issues we are dealing with can be complex, involving livelihoods and lifestyles among other competing interests, but in the end, our natural world is at risk. We lose spaces and species continually, and once lost, that nature is gone forever. While we need to consider the complexities involved, we must keep working to ensure that we all do the right thing.

Ken Ludwig

In the words of Aldo Leopold, "a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise."

This is fitting guidance for our efforts.

Our advocacy work in Nature Saskatchewan is led by our Conservation Director and our Executive Director. With their leadership, we monitor events and developments that may have an impact on nature in the province, discuss the related issues, consult with partners and other stakeholders, and determine the response we may provide that will best represent the interests of our natural heritage.

I would like to thank those serving in these particular roles, and everyone — staff, board members, volunteers, members and interested friends and supporters — who contributes to this important work.

BLUE JAY

Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history and conservation for Saskatchewan and adjacent regions. It is published quarterly by Nature Saskatchewan.

Editor: Annie McLeod
3017 Hill Avenue
Regina, SK S4S 0W2
E-mail: bluejay@naturesask.ca

Editorial Information

Blue Jay welcomes all submissions, preferably by e-mail (although hand-written or typed manuscripts will be considered to accommodate those who do not have access to computer equipment), polished or in need of some editorial assistance. All items for publication should be sent to the editor electronically (in a Microsoft Word document) by e-mail or on CD. Hard copies and CDs can be mailed to the editor at the address above.

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CLEVER CROWS DUNK FOOD IN WATER

Robert D. Loewen
8 Hawthorne Crescent
Regina, SK S4S 4Y2
loewenrobert@yahoo.com

The slow cool spring of 2021, coupled with recovery time from surgery, allowed me a great deal of uncommitted time to enjoy our west-facing deck, which has a clear view of two feeders and a large water dish. There was an unprecedented number and variety of birds that spent at least some time in our neighbourhood. It was marvelous and I do believe I saw every sparrow-like bird in my field guide, as well as all the woodpeckers, doves, and chickadees that made brief stops for food and water.

However, this missive is inspired by a pair of American Crows (*Corvus brachyrhynchos*) that were nesting in a spruce tree in the yard across the easement. As a matter of course I spread small amounts of bird-friendly table scraps underneath the feeders; stale bread and overcooked toast were often part of the menu. The crows had likely laid eggs and were sometimes busy in the yard despite my presence.

One afternoon, I was being very quiet and a crow picked up a hard piece of toast, flew directly to the bird bath and dunked the morsel in the water. It appeared to check me out for a second and then retrieved the now wet scrap out of the water and swallowed it. I had never seen anything like that before. I remained sitting and within 10 minutes the crow did it again. Wow. The bird cleaned up all the dried scraps in similar fashion. I explained my observations to my wife, who is often skeptical of my observations given my social science background. She thinks I confuse things with the hard science done on birds.

Two days later, when my wife returned home after a round of golf, she said she now believed my crow story because she had witnessed the same thing as she came into the house only minutes ago. Hmm said I — there had been no old toast laid out during the past 48 hours. That then raised the question of the birds stockpiling food for dunking, which is not uncommon in the bird world, but certainly not a behaviour I had seen any crow undertake.

An American Crow with a piece of toast at the bird bath. Photo credit: Robert D. Loewen.

CORRECTION NOTICE

In the article The Black Witch Moth – A Rare Prairie Visitor (Volume 79.2 Summer 2021), the location Avonlea should be removed from paragraph five and the number of Saskatchewan sightings of the moth reduced to 20. Note that the digital version of Volume 79.2 already reflected these amendments at the time of issue.

AMERICAN AVOCET (*RECURVIROSTRA AMERICANA*)

RESPONSE TO CHANGING WATER LEVELS AT A MANITOBA SITE

Gordon S. Hammell
Box 37, Erickson, MB R0J 0P0
gmhammell@gmail.com

FIGURE 1: This adult American Avocet at Whitewater Lake, Manitoba accompanied the chick shown in Figure 3. Photo credit: Peter Taylor.

Introduction

The American Avocet (*Recurvirostra americana*), hereafter 'avocet', is a large shorebird with long bluish-gray legs, a long, recurved bill, and a black and white chevron pattern on its back and wings (Figure 1). Avocets breed on sparsely vegetated shorelines, marshes and alkaline flats in central North America from Utah to the mid-latitudes of Alberta and Saskatchewan, in southern Manitoba and at locations along the west coast of California.[1] For Canada and the prairie/parkland pothole region of Manitoba, Saskatchewan and Alberta, Breeding Bird Surveys suggest that populations are increasing slowly (long-term trend 1970-2017 for Canada and prairie-potholes: +0.912 and +0.889 respectively).[2] The main breeding areas in Manitoba are across the prairie/parkland pothole region to the southern edges of the Boreal Taiga Plains north to Red Deer Point and the Interlake south of Ashern.[3] The probability of observation is very low overall, except for three concentrated areas in the western portion of the province: from Melita to Whitewater Lake, from Virden to Russell, and along the southern shore of Lake Winnipegosis.[3] Avocets are occasionally observed in Manitoba pothole habitat such as in the Erickson area, along the southern edge of Riding Mountain National Park,[4] but I was unaware of any breeding site near Erickson during the period 1970–2012.

On breeding, migration and wintering grounds, threats to avocet populations involve loss of wetland habitat, especially loss of ephemeral wetlands with dynamic water level change. Avocets specialize in the use of ephemeral wetlands and wade to feed in shallow water ≤15–20 cm, but also feed while swimming, at water depths up to approximately 25 cm.[1] However, in many areas of the prairie/parkland region, excessive draining of smaller, ephemeral wetlands has created larger, more permanent basins downstream with reduced water-level fluctuation in response to climate cycles. The result, compared to undrained landscapes, has been fewer, relatively stable wetlands that have lower densities of invertebrate forage and less foraging habitat (shallow and muddy shorelines) for shorebirds.[5]

In this article, I describe changes to avocet numbers in response to rapid flooding followed by human-caused water-level lowering on a large, permanent, Class V wetland located at 50.473, -99.906, 2.9 km southeast of Erickson, Manitoba.[6] This area is not usually associated with breeding avocets (personal observations).

Site Location and Water Level Change

The wetland is situated in the Aspen Parkland portion of the prairie pothole region of southwestern Manitoba (Figure 2). The topography of the area is rolling with numerous ponds and lakes. The area and changes over time are described in more detail by others.[7-10] Prior to the 2000s, this large wetland was a complex of three smaller, previously unconnected Class V wetlands with no islands. During the 2000s, water levels rose, peaking in 2011, and resulted in the three wetlands becoming one (21.7 ha, Figure 2). Emergent bulrush stands were flooded and destroyed and water, flooding onto cultivated fields, produced much bare shoreline. Four small grassy islands were created. A ditch, dug in early April 2012, caused the water level to drop ~60 cm (unpublished data), creating mud flats 3-10 m wide around much of the wetland and resulting in two grassy islands being reunited with the mainland but creating two new mud islands (0.07 and 0.19 ha in 2015, Figure 2). From 2012 to 2019, water levels fluctuated at this lower level, and the two new mud islands changed size annually, gradually becoming more vegetated with grasses and forbs. Lower water levels in 2019 resulted in the two islands merging and the distance to the mainland being reduced to approximately 3 metres.

Avocet Response

I conducted waterfowl surveys at approximately weekly intervals from mid-May to early September (1970-1972 and 2008-2019) on a 680-ha block surrounding the wetland and opportunistically collected information on avocet numbers. I observed the wetland from several elevated positions 80-130 m from the mud islands. I never visited the islands; thus, no detailed observations on nest numbers, clutch size, etc. were possible. No avocets were recorded on the wetland from 1970-1972 and from 2008-2010 (unpublished data). One pair of avocets was regularly observed at one location on the wetland during the breeding season in 2011, presumably in response to the wetland conditions created by the flood. Breeding was not confirmed. Maximum numbers recorded from 2012-2019 were: 2, 10, 10, 14, 24, 4, 14 and 3 respectively. The 2016 count in mid-May possibly included migrants, as later counts averaged 6-8 birds. Almost all individuals were observed on or near the two mud islands created in 2012. Breeding attempts were suspected some years (birds sitting on what appeared to be a nest scrape in open locations on the island). In 2015 and 2016, successful reproduction was confirmed (chicks observed) and I was always met by flying adults repeating their characteristic predator alarm call.

Avocets often use islands (natural and manmade) for nesting, especially those with sparse vegetation.[11,12] The nest is typically located in areas on the island with the least amount of vegetation, often on exposed bare ground sites with 360° visibility. This nesting behaviour was observed at Erickson. Lone birds recorded sitting for the entire observation time (15-30 minutes) were assumed to be incubating and these nest sites were in exposed unvegetated sites. Interestingly, these islands provided a secure nesting environment (one or more eggs hatched) for at least two years and adults settled annually despite the presence of an active long-time raccoon (*Procyon lotor*) den located in abandoned farm buildings within 300 m of the islands (Figure 2). These islands may not have been far enough removed from the mainland to deter raccoons because on one occasion two

FIGURE 2: Location of wetland and two islands occupied by avocets near Erickson, Manitoba, 2011-2019. Long-dash line represents extent of 2011 flood. Short-dash line indicates mud islands formed after drawdown in 2012. Google Earth view taken fall 2015. Note that both islands have partialy revegetated.

racoons were observed swimming near the islands. Avocets have high fidelity to breeding areas and they show little tendency to disperse in response to nesting failure.[13] Therefore, the continued existence of this isolated breeding colony may well be determined, not by the extent of egg or chick loss due to depredation, but by the presence of habitat, attractive to breeding pairs, which in turn will be determined by water level fluctuation and vegetative encroachment on the islands.

In conclusion, this pioneering effort by breeding avocets in prairie/parkland wetlands near Erickson demonstrates the importance of fluctuating water levels in creating suitable avocet breeding habitat and the species ability to quickly locate and utilize same. This ability to colonize newly available habitats provides protection from the effects of locally changing patterns of habitat availability, but will not help them avoid the effects of permanent habitat loss.[13]

Acknowledgements

Thanks to Ian Glass (Ducks Unlimited Canada) for library support and Peter Taylor for permission to use his photos. I thank the landowners and others around Erickson for their hospitality and permission to access their lands. Peter Taylor and Annie McLeod, *Blue Jay* editor, provided helpful comments to improve earlier drafts of this manuscript.

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FIGURE 3: This American Avocet chick was feeding with a watchful parent near a partly flooded section road at Whitewater Lake, Manitoba, 24 June 2016. Photo credit: Peter Taylor.

CAT-TAILS, INSECTS AND COWS

David J. Larson
PO Box 56
Maple Creek, SK S0N 1N0
dmlarson@sasktel.net

Introduction

Cat-tails (*Typha* L., family Typhaceae) are iconic plants of wetlands over much of the world. The large size of the plants and their characteristic form make them easily identifiable and their abundance and wide distribution, from cold temperate to tropical regions, mean they are present in much of the world's wetlands. Most cat-tail diversity is in the Old World, but the Nearctic has three species of which two — broad leafed cat-tail (*Typha latifolia* L.), a cosmopolitan species, and narrow leafed cat-tail (*T. angustifolia* L.), originally from the Palaearctic but now also widely distributed in eastern North America — occur in Canada.[1] Broad leafed cat-tail is the dominant species across the Canadian Prairie provinces whereas narrow leafed cat-tail is restricted to eastern areas, west to south-central Saskatchewan.[2] All observations reported here were made in southwestern Saskatchewan and adjacent Alberta where broad leafed cat-tail is the only recorded species, although the comments probably apply equally well to narrow leafed cat-tail as the two species are similar morphologically and ecologically and commonly hybridize.[2] The general structure and taxonomy of Canadian Prairie cat-tails has been described by Harms et al., and their biology and economic importance by Grace and Harrison.[2,3]

Because cat-tails are abundant, conspicuous and appear succulent with their thick leaves and roots, one would suspect that many animals feed on them. In fact, this is not the case. Only a few specialized insect species occur on the plants, and for the most part generalist herbivores tend to either eschew or make limited use of them. Over the last 20 years, I have been casually observing cat-tail establishment and the fate of these plants in several small dams and dugouts in southwestern Saskatchewan near Maple Creek (SW 29 09 26 W3). This paper is a summary of some of these observations along with some thoughts on the position and significance of cat-tails in wetland ecosystems. Insects completely dependent on cat-tails are discussed first, then those more loosely or casually associated, followed by observations on cattle and cat-tails.

This is no attempt at a comprehensive list of cat-tail associated animals. Several studies of the insect fauna of cat-tails have been undertaken (notably by Claassen 1921), as well as there being references to various insects found in association with cat-tails.[4] Wildlife (vertebrates) and cat-tails have been discussed by Grace and Harrison.[3]

Insects that feed only on cat-tails

1. The Cat-tail Moth (*Limnaecia phragmitella* Stainton) (Lepidoptera, family Cosmopterigidae). (British name - Shy Cosmet).

Description.[5] Adult (Figure 1): small, wing length 5.9 to 10.2 mm, wings slender or lanceolate, greyish to light brownish with a faint longitudinal stripe on fore wing.

Larva (Figures 2, 3): Whitish to very pale brown, with five slightly darker brown dorsal longitudinal stripes; feed only within the female portion of the flower spike but bore into leaf sheaths and the main stem for pupation. Pupae (Figure 4) usually in silk-lined tunnels in overwintered cat-tail stems and leaves, sometimes under the down of female flower spikes.

Ecology. Claassen gave a good account of the ecology of the larvae,

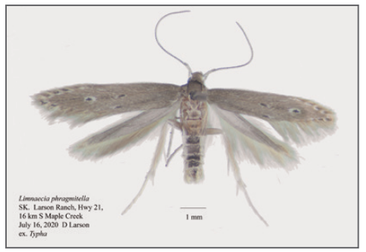

FIGURE 1: Adult cat-tail moth. (Specimen to be deposited in Royal Saskatchewan Museum Collection (RSMC)).

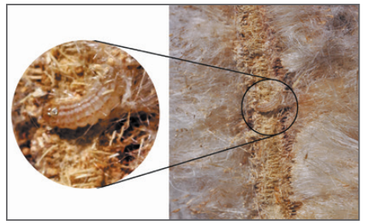

FIGURE 2: Cat-tail moth caterpillar, on female flower spike.

FIGURE 3: Cat-tail moth caterpillar, on cat-tail stem.

FIGURE 4: Cat-tail moth pupa in a silk-lined pupation tunnel in a dead leaf sheath.

FIGURE 5: Cat-tail patch on a small dugout, May 2020. The cat-tails are fluffed out but the pappus is still attached due to the silk webbing produced by cat-tail caterpillars.

FIGURE 6: Cat-tail patch in same dugout and time as Figure 5. Cat-tail caterpillars did not infest this patch so over winter the seeds detached and blew away leaving the bare flower rachis.

which is summarized here.[4] Larvae feed only within the pistillate (female) flower spikes of various species of cat-tail. Young larvae feed on the styles of the pistillate flowers, but as the flowers grow and become dry, larvae move inwards and eat the seeds of the plant. Several larvae may occur per spike. Half-grown larvae overwinter near the rachis of the flower spike, where they often eat away the basal part of the stalks that bear the seeds. As they feed and move the larvae spin silk which ties the down, or pappus, together, thus keeping it from being torn off or blown away although overwinter the heads fluff out (Figure 5). In the spring, larvae complete their growth feeding on the seeds, then most leave the spike and descend the stem to the leaf sheaths where they bore into the dead stalk or leaves and transform into pupae within silk-lined tunnels. Adults emerge in mid-summer. The moths are extremely local and do not fly far from the host plant; this restricted movement is often evident as both infested and uninfested patches of cat-tails may exist around the edge of the same pond (Figures 5, 6).[5]

Nero noted that in the spring both red-wing and yellow-headed blackbirds pull the overwintered cat-tails apart, fluffing up and releasing down, in a search for overwintered larvae.[6] He suggested these larvae may be an important early spring food-source for these birds as well as chickadees and woodpeckers which he also reported attacking over-wintered flower spikes. Later in the season, adult moths may be eaten by birds catching flying insects.

Distribution: Europe, North Africa, Australia, New Zealand. In North America from NS to BC and south to VA and OK.[5,7] Powell and Opler noted the species "has been cited as natively Holarctic, but it was not discovered in England until 1851 and in North America until 1899 and is introduced in Australia and New Zealand".[8] The species may not be native to North America. Records for US states west of Wyoming (e.g., New Mexico, California) have been since 1965 so it appears to be spreading westward. The Saskatchewan distribution has not been investigated but the moth probably occurs wherever cat-tails grow as I have made drive-by observations of shaggy flower spikes on overwintered cat-tails, indicating moth infestation, wherever I have been in the southern part of the prairies.

2. The Cat-tail Bug (*Chilacis typhae* (Perris)) (Hemiptera, family Artheneidae).

Description.[9] Adult (Figure 7). A small true bug. Adult length 3.8 to 4.5 mm, body shape elongate, oval, more or less flattened; dorsal color yellowish to reddish-brown, with large darker punctures, ventral surface darker; body smooth and without apparent hairs; antennae short, with four segments; wings present and functional in adult.[9]

Ecology.[9] All stages feed on seeds in the female spikes of cat-tails. The bugs have a fondness, perhaps even dependency, for those heads fluffed out due to attack by caterpillars of the cat-tail moth. The tunnelling of the caterpillars in the spikes allows the bugs access to the tightly packed flowers and seeds on which they feed, and the webbing produced by the caterpillars holds the seedhead together over winter providing overwintering cover and keeping the seeds available the next spring for the bugs to feed on. The bugs (mainly adults but also some large nymphs)

FIGURE 7: Cat-tail bug, adult, dorsal aspect. (Specimen deposited in RSMC).

hibernate in the fluffed-out seed heads as well as in leaf sheaths where they can be found in early spring along with some overwintering cat-tail caterpillars. Sunning and mating individuals have been observed on the sun-warmed side of overwintered female spikes as early as April. With the appearance of new flower heads, adults occur first on the new male spikes then the lower female spikes later. In warmer areas of Europe two generations per year have been reported with nymphs overwintering in the female spikes along with adults. In the prairie region, diapausing adults are the predominant overwintering stage, but small numbers of large nymphs also overwinter. The number of prairie generations per year is not known.

Distribution.[9] This is a European species that has been introduced into North America. It was first recorded from Pennsylvania in 1986 but is now widely distributed, from the Maritime provinces to BC and in northern parts of eastern and western US. The first prairie record was from southwestern Saskatchewan in 2006.[10] A second species of the family, *Holcocranum saturejae* (Kolenati), also introduced into North America from Europe in the 1990s, has a more southerly distribution in the US and seems unlikely to occur in Canada.

A native species of seed bug, *Kleidocerys resedae* (Panzer) (Hemiptera, Ischnorhynchinae), has been recorded from cat-tail heads in eastern North America.[4] The species occurs throughout the Prairie provinces, but has not been seen on cat-tails locally.[9] This insect and other members of its family are called catkin bugs as they feed on the scaley catkins of trees such as birch, alder and bog-myrtle (*Myrica gale*). Bog-myrtle especially often grows in close proximity to cat-tails in eastern Canada and it is likely bugs from bog myrtle have been found on cat-tails.

3. The Cat-tail Beetle (*Telmatophilus typhae* (Fallén)) (Coleoptera, family Cryptophagidae).

Description.[11,12] Adult (Figure 8). Members of the genus *Telmatophilus* are small, 2.4 – 3.0 mm, elongate, dark brown to black, with white pubescence. The antennae have a pronounced 3-segmented apical club, and the lateral margin of the pronotum is finely serrulate. Two species of the genus occur in North America, but only cat-tail beetles feed on cat-tails.

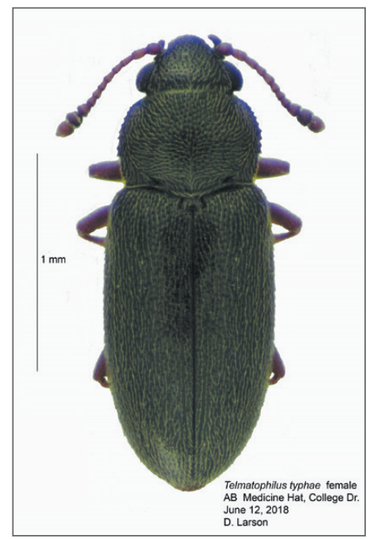

FIGURE 8: Cat-tail beetle, adult, dorsal aspect. (Specimen to be deposited in RSMC).

Ecology.[11, 13] Most specimens have been found on male flower spikes. Shortly before and during anthesis, beetles congregate on and run actively over the male flowers, their numbers subsequently dropping as the flowers dry. The ecology of *Telmatophilus typhae* is not known but that of a similar European species is as follows: eggs are laid in clusters on the outer side of immature male spikes and on hatching the first two instars feed on immature stamens and pollen. The final instar (3rd) feeds on mature pollen grains. Pupation occurs in the flower clusters and the beetles overwinter in leaf sheaths. The beetles are active fliers and have been found in flight around cat-tail patches. Most Cryptophagidae feed on fungal hyphae, spores and conidia[14], but as cat-tail pollen is often aggregated due to infestation by fungi[2], the fungi may also be the food of the beetles.

Distribution.[11] Two species of *Telmatophilus* occur in North America. The Nearctic species, *T. americanus* LeConte, which occurs across southern Canada, does not feed on cat-tails but is on other marsh plants such as *Sparganium*. The cat-tail beetle, a Palearctic species introduced into North America, is smaller, lacks distinguishing male characters of the hind tibia and sternite of *T. americanus,* and occurs only on cat-tail where all stages feed on the male flowers. The first North American records are from the Maritime provinces in 1986. Since then, it has been found west to southern Saskatchewan and Alberta, and north to at least the North Saskatchewan River. The spread across the continent has been remarkably rapid, probably enabled by a high tendency to fly and the continuous distribution of the host plant.

Insects that feed on cat-tails but are not specialists

In addition to the cat-tail specialists described above, a number of insect species have been described as having various degrees of association with cat-tails. Some of the most prominent are caterpillars of the cutworm moth family Noctuidae (Lepidopetera). This is a large family of moths that is represented in almost all habitats. Some species typically occur in wetlands where their caterpillars feed on various plants, often without showing much specificity. However, species that occur in the Canadian Prairie provinces and have been mentioned by several authors as feeding on cat-tails are: Henry's marsh moth (*Acronicta (Simyra) insularis* (Herrich-Schäffer), Noctuidae, s.f. Acronictinae) which feeds on many low plants, especially grasses in wet places but will also feed on cat-tail; and the oblong sedge borer moth (*Capsula oblonga* (Grote), Noctuidae, s.f. Xyleninae) whose larvae feed mainly on cat-tails and occasionally on sedges (*Cyperus*), feeding near the water surface as leaf miners in the first instar then completing development as borers within the stem base of the host cat-tail, pupating within the stem and the adult moth emerging through a pre-bored hole.[7,8] Infested stems are stunted, and do not flower. The larva of the oblong sedge borer has the spiracles of the eighth abdominal segment enlarged and the longitudinal tracheal trunks large so that the caterpillar can breathe with its anterior body submerged; the larva of Henry's marsh moth shows no obvious modifications for semiaquatic life.[4]

Caterpillar feeding generally causes only local damage to stands of emergent vegetation in marshes and there are few cases of insects creating open-water areas in dense stands of emergent vegetation and this generalization holds largely for insects of cat-tails.[15] However, cat-tail destruction by mining by larvae of various unspecified moths has been reported.[16]

Few beetles are associated with cat-tails. A few species of weevils (Curculionidae) of the genera *Sphenophorus* Schönherr and *Tournotaris* Germar and are known to feed on the rhizomes and stems. However, the species most specialized on cat-tail, *S. australis* Chittenden, occurs in eastern Canada (ON, PQ) and throughout the US except for the northern Plains states; it has not been reported from the Canadian Prairies. *Sphenophorus australis* larvae feed in rhizomes, at the stem bases, and stunt development of stems. These feeding sites accumulate starch and nutrients destined for stem and flower growth.[17] *Tournotaris bimaculata* (Fabricius) is a holarctic species and its larvae have been reported mining broad-leafed cat-tail stems in Europe. There are no North American host records. The species occurs in wetlands and moist meadows so cat-tails are a likely host, but it also commonly occurs in the absence of cat-tail so other wetland plants must also be used.

Sucking insects of the Order Hemiptera that feed on plant sap are very poorly represented on cat-tails. In a comprehensive list of the aphids of Canada, only two genera, *Macrosiphum* and *Rhopalosiphum,* were listed as having species feeding on cat-tail.[18] No species of the large family Cicadellidae (leaf hoppers) are reported from cat-tail. The diverse family of plant bugs (Hemiptera: Miridae) has no prairie species recorded from cat-tail.[19]

FIGURE 9: Several species of solitary bees (Haliictidae, *Lasioglossum* spp.) on male cat-tail flower spike.

A review of the flower visitation and pollen collection records of North American Hymenoptera gives no records for cat-tail.[20] Cat-tail pollen, like that of other wind-pollenated plants, has low nutritional value for honeybees.[21] However, under some conditions, bees will collect pollen from cat-tail spikes (Figure 9). Over the course of the morning when this photograph was taken, a wave of dehiscence was passing up the male flower spike and bees were aggregating where the pollen was being released. Probably the low nutritional quality of the pollen was offset by its abundance and ease with which bees could collect it. However, this is not a regular occurrence for I have elsewhere seen cat-tail flowers in anthesis without attendant bees. Honeybee colonies were within 200 m of where the photograph was taken yet no honeybees were observed and *cat-tail* is not recognized as a significant source of pollen for honeybees.

Cows and Cat-tails

Inclusion of cows in a discussion that deals largely with insects may seem out of place. However, the relationship of cows to cat-tails reinforce some of the patterns shown by insects.

Manning made some observations about the cattle breeds most prevalent on the Canadian Prairies.[22] These breeds of cows evolved mostly around the British Isles, that is in a wet climate that favored forbs over grasses, and their soft, fleshy bodies and bovine dispositions are best seen as adaptations to eating broad-leafed, marsh plants. In the dry western prairies, these cows gravitate to water and concentrate their grazing in its vicinity, damaging and altering moisture-loving plant communities as their first action in the landscape. But cows do not like cat-tails. I have watched four Galloway cows, the epitome of British cattle breeds, in a diverse grassland environment. During the growing season most of their activity was near water and they did eat some cat-tail — although never more than a few stalks at any time. However, they did destroy many cat-tails as their hooves flattened stalks and leaves and, on sinking into the soft mud, sliced and churned up rhizomes. In fact, this was why the cows were allowed into the wetland, to knock back cat-tails that were taking over the pond margin. The cows were quite successful. For this reason, prairie ponds exposed to prevalent prairie grazing intensities lose their cat-tails. In southwestern Saskatchewan cat-tails are usually seen only in sites protected from cattle or in large, deeper marshes that cattle find difficult to negotiate.

Ranchers are always looking for food sources for their cattle and cat-tails have often been looked at as a food for livestock. However, nutritional analysis reveals that that the food value of the above ground portion of the plant is poor. Lardy et al. concluded "Cat-tails have little feed value but can be fed in an emergency. Cat-tails cut at a relatively young age may be equivalent to straw in feeding value. Mature cat-tails are a poor feedstuff, having energy values similar to or lower than straw and may best be used as bedding."[23] This is almost certainly why cattle feed so lightly on them, they have no food value.[24] Supporting this is an observation that the most intense cattle feeding on cat-tails is on the developing female spikes before they mature. Cows relish these and will pick and eat those spikes they can access (Figures 10, 11).

In selectively eating cat-tail flower spikes, cows reflect the insect's habits. For the most part, cat-tails are unsuitable food, of too low nutrition for animals. It is only by focusing on those parts of the plant in which nutrients are concentrated can herbivores survive. Structural tissue and sap are not sufficient.

Cat-tails require full light. They

FIGURE 10: Cows eating immature female cat-tail flower spikes.

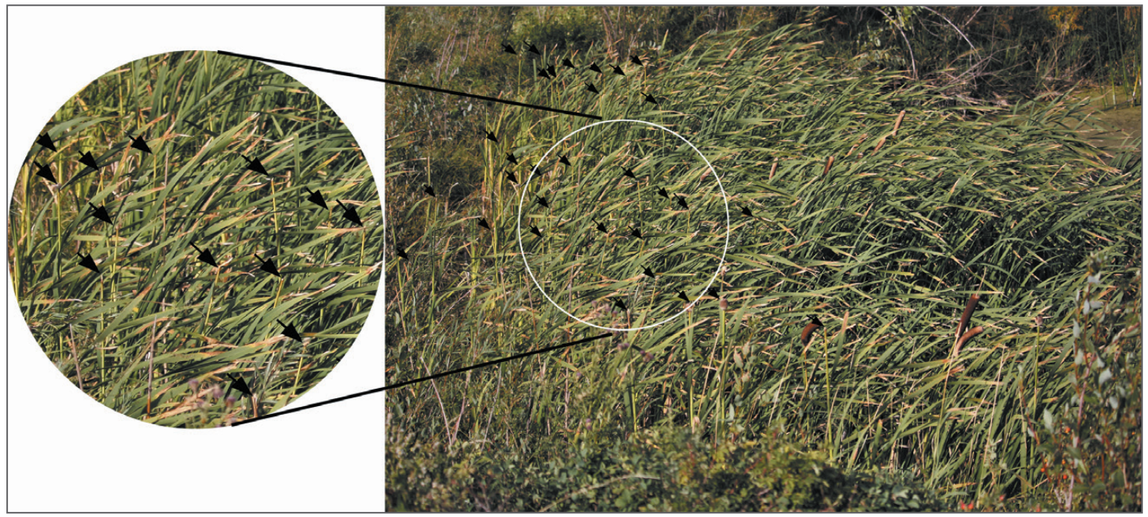

FIGURE 11: A cat-tail patch on a small dam where cows have been eating female flower spokes. The arrows point to broken stalks that had probably had their flower spikes picked by cows. The broken stalks are to the left side of the photo which is the land-ward side. The cat-tails to the right are in water too deep for cows and most of the flower spikes are intact.

colonize newly open soil surface and compete with other vegetation by overgrowing it. When successful they produce a monoculture that precludes most other plants as well as reducing animal diversity and abundance and they do this by producing large quantities of nutritionally poor body mass.[25] Even their reproduction involves quantity over quality in propagules, but these do offer a richer reward to those animals capable of accessing them for the seeds, although tiny, are starchy and oily.[2] The rhizome and basal stalk feeding caterpillars and beetles have their own tricks for surviving on cat-tail, such as galling tissue to concentrate nutrients in the feeding area, or mining and feeding in the stem base where they can intercept nutrients being translocated to the stem and leaves. They may possess a microbiota that assist in digesting otherwise refractory plant material, or the lack of specialization on cat-tails shown by many herbivores allows them to obtain necessary nutrients from a broader range of sources.[26, 27] Cat-tail rhizomes are where the plant stores starch and other nutrients to support the rapid summer growth. However, they occur in an environment that is difficult for animals as water levels fluctuate. Animals accessing these stores may have a difficult time colonizing and existing in the rhizome but by boring in the buds and basal parts of stems they can get these nutrients but from a protected feeding site. All the larger insect herbivores use this strategy.

Discussion

The cat-tail community has some unusual features, especially the lack of diversity in the macrofauna. Nutritional limitations may be the answer as described above, but there are also historical factors involved. There is a consensus in the literature that broad leafed cat-tail is indigenous to North America at least to the extent that it existed here prior to arrival of Europeans. However, this should be checked carefully for if based on palynological evidence, it should be recognized that the pollen of cat-tail and bur-reed are so similar that they are usually not differentiated and together are used as indication of wetland environments. It seems unusual that an indigenous plant has only one morphologically specialized indigenous herbivore feeding on it (oblong sedge moth caterpillar). Narrow leafed cat-tail is more likely an introduced species which, within a century or so, has spread across the continent and formed stable but sterile hybrids with broad leafed cat-tail.

Wide distribution and abundance are not indicators of how long a species has occupied an area as shown by the specialized cat-tail insects. Among the cat-tail specialists, the cat-tail moth has the longest history with the first North American record being 1899. This was late in the great period of discovery and description of the American Lepidoptera fauna, and although the moth is small, and undistinguished, it was hardly likely to be overlook by early naturalists because of its distinctive habits. It was described 50 years earlier in England so the existence of such a species was not unknown to the English-speaking naturalist community. It may not be an indigenous species, but rather an early immigrant from the Old World that is still spreading into the west and northwest parts of the continent. Certainly, the cat-tail bug and the cat-tail beetle are recent introductions with first North American records for both species being 1986 in the northeastern US and Maritime provinces, respectively, and first prairie records being 2006 for the bug and 2017 for the beetle. Both species spread across much of the continent and through various biomes in 30 years or less, the spread possible due to the abundance of cat-tails and perhaps facilitated, at least for the bug, by an earlier expansion of the moth which prepared the habitat for the bug.

Thus, we see the familiar and iconic cat-tail community may not be the stable and enduring community we take for granted. It is in a state of revolution and change. The center of world cat-tail diversity, Eurasia, still contains many cat-tail specialists that may show up here at any time for with globalization and rapid mass transport many unexpected, exotic species are turning up in our ecosystems.

Acknowledgements

I thank Cory Sheffield, Royal Saskatchewan Museum, for identification of the bees. Margaret Larson, through her patient observation and interest in cows, showed me there is more to them than simply grass-eaters and cud-chewers and that they are very adept at learning their way around the range. Figures 7 and 8 were previously published in Canadian Journal of Arthropod Identification, No 34 (Figure 7) and Newsletter of the Biological Survey of Canada, Volume 37 (Figure 8).

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POETRY

Harris Sparrow

Harris Sparrow, cross my path,
And tell me all is well in Warden's Grove,
The Thelon River clear and lush,
And still beyond the poison
Of my reach.

Harris Sparrow, cross my palm,
And hear what is to come from fear and greed.
My mind obsessed and numbed by here and now,
I'll dig the ends of all the rainbows,
Until the rain is gone.

Harris Sparrow, cross my heart,
And hope to live forever if we can.
Teach me your wise path across this earth,
A narrow trail - enough, not less, not more.
An imprint, light as a feather.

R.B. Cossett
P.O. Box 71
Smiths Cove, NS
B0S 1S0
rbcossett@gmail.com

IMMIGRANT GONE TO HEAVEN:
DUTCH POLDER TO CANADA'S FRONTIERS

Kees Vermeer, 2021. FriesenPress. 258 pp. Available in paperback and hardcover.

Joel Cherry
Regina, SK
joeldcherry@gmail.com

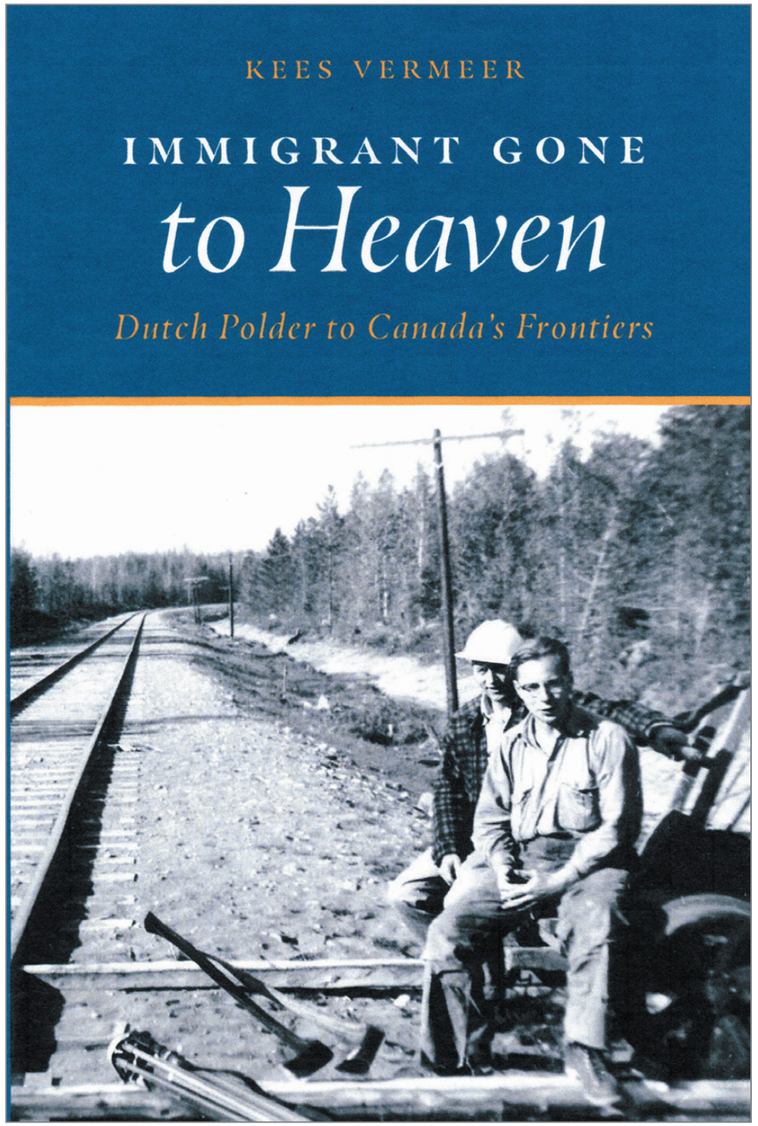
During his career as an ornithologist, Kees Vermeer published dozens of research papers on the ecology and conservation of birds such as auklets, storm-petrels, puffins, and gulls. A quarter-century into his retirement, Vermeer discovered a new subject to write about — himself.

Part of Vermeer's fascination with the Glaucous-winged Gulls he studied on B.C.'s Mandarte Island as part of his Master's research is that they are like humans in that they form long-term pair bonds and family bonds and share in the rearing of young. *Immigrant Gone to Heaven* reveals a man who is somewhat like a bird, migrating great distances, seeking out remote places that many would find inhospitable, and doing so without any apparent fear.

In a sense, *Immigrant Gone to Heaven* is three biographies in one, reflecting on Vermeer's life through three specific lenses. The first two parts of the book follow Vermeer on his titular journey from the Dutch Polder to Canada's Frontiers, first as immigrant and then as ornithologist. The third contains reminiscences of his childhood and the Nazi occupation of his homeland during the Second World War.

Part I: Life as an Immigrant, begins in 1953 in the Biesbosch region of the Netherlands, as a young Vermeer decides to immigrate to Canada. Departing from his homeland with little more than the clothes on his back, he takes a dizzying variety of often unpleasant jobs to make his way to British Columbia and earn an education. Part I culminates in Vermeer receiving his PhD in Zoology from the University of Alberta, and marrying his wife Rebecca in 1967 and 1968, respectively.

Part II: Life as an Ornithologist, has a broader scope, following Vermeer throughout his life as a naturalist and scientist from childhood nest-finding trips to the polder throughout his lengthy career with the Canadian Wildlife Service. Along the way, his travels take him everywhere from B.C.'s rocky Triangle Island, where he helped to establish a research station, to Suriname where he studied the effects of pesticides on birds and rice fields.



This part of the book also contains case studies regarding topics as varied as the effects of climate change, pesticides and habitat loss on the ecology of several bird species. These stories are told from the first-person perspective and provide a glimpse into life in the field, in addition to the valuable research itself.

Interestingly, Vermeer decided to close his story by going back to the beginning. Part III: Reminisces of Youth and World War II contains stories of everyday family life under Nazi occupation. Vermeer was only 10 years old when the Germans invaded the Netherlands, but he was wise beyond his years. For a time, the Vermeer family was forced to share their home with a German tank crew, and one of the more impactful moments of the book is Vermeer's pity for them when the few broken survivors march back through town from the front lines.

The book's coda is a series of tributes to Kees, initially published in 1995, that provide testament to his lasting influence and legacy in Canadian ornithology.

Throughout *Immigrant Gone to Heaven* Vermeer paints remarkably detailed pictures of the people, places, and events in his life. As a reader, it's not hard to imagine yourself on the windswept Pacific islands or in the small home in the Netherlands. Vermeer's memory is prodigious, and it's easy to forget that he was in his late 80s when he wrote these words. Excellent photos, often in colour, of family, wildlife, and important places help to illustrate the story as well.

Vermeer is a gifted storyteller, and his book is packed with entertaining, thought-provoking, and educational stories, all sprinkled liberally with his dry sense of humour. Before it was fleshed out into a full autobiography, *Immigrant Gone to Heaven* began as a series of short stories Vermeer wrote for his family in the Netherlands. It's fortunate it didn't stay limited to personal correspondence, since Vermeer's tales of trans-Atlantic immigration, ornithological field research and wartime survival are sure to engage and entertain a diverse audience.

"Immigrant Gone to Heaven is a remarkable book. It grips the reader from the moment the author joins an Emigration Training Centre in the Biesbosch region of the Netherlands with the goal of moving to Canada. We follow his experiences as he lands in Canada and works his way up from farm-hand to obtaining a doctorate in Zoology. The section of the book detailing his explorations in ornithology are as fascinating as the stories of immigration and the memories of World War II. The book takes the reader on a riveting journey of exploration in many facets of social history and science as viewed through the lens of an inquisitive and always optimistic upbeat man. I strongly recommend this book to anyone interested in learning more about World War II, immigration, bird behavior or even just in how a life's journey can unfold with all its unexpected twists and turns."

—Tom Bijvoet, Publisher, DUTCH the Magazine – Maandblad de krant

"Brimming with charming personal anecdotes and fascinating ornithological research in equal measure, Kees Vermeer's *Immigrant Gone to Heaven* paints a vivid picture of an adventurous and fearless life. Vermeer's curiosity and insight into the natural world are evident from his descriptions of childhood nest-hunting in the Dutch polder, to his pioneering work with seabirds on British Columbia's windswept Triangle Island. His stories of everyday life under Nazi occupation are enthralling in their own right. Naturalists, scientists and history buffs alike will enjoy this book."

—Annie McLeod, Editor of Nature Saskatchewan's Blue Jay.

BANDED CANADA GOOSE RESIGHTINGS IN WASCANA PARK, REGINA, SASKATCHEWAN

Canada Goose M414 in Wascana Park, Regina, Saskatchewan – June 9, 2021. Photo credit: Ryan Fisher.

Ryan J. Fisher
Royal Saskatchewan Museum
2340 Albert St.
Regina, SK
ryan.fisher@gov.sk.ca

Introduction

Canada geese (*Branta canadensis*) are a well-known, long-lived species, with some records of wild geese living over 30 years.[1] Annual survival rates of adult Canada geese range from 46 per cent in the Atlantic Flyway to 72 per cent over a four-year period in Regina, Saskatchewan.[2,3] Furthermore, urban geese typically have higher survival rates as compared to rural geese and tend to return to the same areas year after year.[4]

There has been a long history of banding Canada geese in Regina.[5] Between 2009 and 2015, Wascana Centre Authority (now Provincial Capital Commission) banded Canada geese that were captured in Wascana Park with a standard metal band.[3] From 2010-2015, they also added red plastic leg bands with white coding to some geese, thereby making reading the band without catching the bird much easier.[3] Some of these birds were translocated to Cumberland Lake (approximately 425 km northeast of Regina) and subsequently released, and some were released directly back into Wascana Park.[3] Each year during this study period, banded geese were resighted or recaptured.[3]

In the last several years, many people who frequent Wascana Park have noticed colour-banded geese, but to our knowledge, there has not been a concerted effort to resight banded birds to determine which geese were still using Wascana Park since the initial study period. In 2020, we enlisted nine volunteers to record resightings of banded Canada geese in Wascana Park. Volunteers were asked to record any visible colour banded individuals and, when possible, to read and record aluminium leg band numbers. We searched for banded Canada geese from 20 April to 16 May within the boundaries of Regina, but mostly concentrating in or near Wascana Park.

Results and Discussion

We encountered 59 unique, banded individual geese over the four-week period. Thirty-seven of these individuals were females and 22 were males. Adult Canada geese cannot be reliably aged during banding like some other bird species, therefore the age of a bird is described as a minimum based on the year banded, while acknowledging the bird could be much older. Of the colour banded geese we observed in 2020, ages ranged from at least six years old to 12 years or older (Table 1), with the average age being at least seven years old. The average age is skewed, as banding has not occurred since 2015, so birds must be six years or older if they carry a red colour band. Eleven of the geese had been translocated to Cumberland Lake in 2009, 2010, 2011, or 2012 and then had been reencountered in Wascana Park in 2020. Flockhart & Clarke (2017) found that 83 per cent of adult Canada geese translocated out of the park returned in subsequent years, so it is not surprising to see these birds in 2020. We did not encounter any geese that were banded outside Regina. Almost all of our resightings were of alphanumeric bands (57) and two were of birds that had single aluminium bands. All band resightings were reported to the Bird Banding Office at the conclusion of the study (www.reportband.gov).

TABLE 1. Hatch years of banded Canada geese that were resighted in Wascana Park in 2020. Adult Canada geese cannot be reliably aged during banding like some other bird species, therefore the age of a bird is described as a minimum based on the year banded.

HATCH YEAR	AGE IN 2020	♀	♂	TOTAL
2008 or earlier	12+	3	2	5
2009 or earlier	11+	6	2	8
2010 or earlier	10+	3	0	3
2011 or earlier	9+	4	2	6
2012 or earlier	8+	7	1	8
2013 or earlier	7+	6	4	10
2014 or earlier	6+	8	11	19

Observing 59 banded individuals was relatively high given that five years has elapsed since the Canada Goose banding program was discontinued. The original study typically resighted, on average, 108 banded individuals per year while the project was ongoing.[3] We likely missed some banded individuals and it would be beneficial to continue resighting efforts throughout the year. As a result of an inability to read numbers on most aluminium bands, either due to distance or numbers on the bands being obscured by dirt/mud or wear, resightings of identifiable birds with single aluminium leg bands was low.

Our small study highlights the continued use of Wascana Park by several geese that were banded as part of the Canada Goose banding program from 2009-2015.[3] Given that some geese are still using Wascana Park for breeding even after a decade, it indicates that this urban park provides suitable nesting habitat for these birds over the long term.

Acknowledgements

We would like to thank the volunteers that helped to resight banded Canada geese during the initial COVID-19 shutdown in Regina, Saskatchewan: Gail Fennell, Janet Ng, Andrea Benville, Matthew Weiss, Brett Quiring, Karen McIver, Chris Harris, and Rebecca Magnus. Thanks to Jared Clarke and Mark Brigham for reading and commenting on a previous draft of this paper.

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POETRY

Windy Day

The prairie grasses wave
sinuously, beckoningly,
at the strong urging
of the wind blowing,
gusting due west.

Don't even have to
close my eyes to
envision, as said
by Harry Hourie,
the entire panoply
of prairie life in
his story of the
Last Great Herd.

A meadowlark bursts forth
from cover and ascends,
despite the wind's strength
in a definitive vertical flight
until banking sharply off
on some errand, mission.

A shy jumper sights me
with the dogs. Flees.
Clears the north fence
in stride, until she's gone,
seemingly vanished where
the green earth is met
by the blue of Heaven.

George Grassick
Box 205
Lumsden, SK
S0G 3C0
ggrassick@sasktel.net

REMEMBERING AN ICONIC VISIT FROM PRINCE PHILIP

Daniel Bushman
The Watrous Manitou
Watrous, SK
twmadvisornews@gmail.com

As people from around the world mourned the passing of The Duke of Edinburgh, who passed away April 9, 2021 at the age of 99, many from the local area also reminisced about a visit Prince Philip took to Last Mountain Lake Migratory Bird Sanctuary more than 30 years ago.

An advocate for wildlife and wetlands as the President of the World Wildlife Fund, The Duke of Edinburgh's visit to Saskatchewan in June of 1987 left a lasting impact. Along with attending an international conference in Regina, Prince Philip visited a Burrowing Owl site east of Regina and flew to Last Mountain Lake Migratory Bird Sanctuary to celebrate the sanctuary's centennial while witnessing the signing of establishing the north end of the lake as a National Wildlife Area (NWA).

The history of the bird sanctuary east of Simpson runs deep, as land was set aside by Canada's first Prime Minister, Sir John A. Macdonald, after learning waterfowl, shorebirds, and waterbirds were incredibly plentiful at the north end of Last Mountain Lake. In 1887, those lands were set aside from settlement and development to protect this special place for birds — the first in Canada and North America. Once the Migratory Birds Convention Act was passed in Canada, these lands were officially designated as a Migratory Bird Sanctuary in 1921.

Commemorating the sanctuary's centennial in 1987, and viewing the historic NWA signing, Habitat Biologist for Canadian Wildlife Service between 1978 and 2009, Philip Taylor, remembers the day Prince Philip arrived to the area by helicopter. In fact, Taylor — who was in charge of managing Saskatchewan's habitat program and sanctuaries — was instrumental in planning the ceremony that included the Duke of Edinburgh.

Photo credit: Environment and Climate Change Canada, 1987.

As the centennial approached, Taylor — along with then Canadian Wildlife Service area manager Clint Jorgenson — began thinking about what they could do to commemorate it. Planning to establish nature trails, a driving tour, a viewing tower and information kiosk, Taylor said, "We were working on having it designated as a national historic site, which it now is, but that still didn't tie together our ideas and thoughts about recognizing the centennial of establishing the bird sanctuary."

As work progressed and one thing led to another, Taylor connected with the World Wildlife Fund's Monte Hummel who mentioned Prince Philip was very interested in global conservation. With a special interest in Canada and being President of the World Wildlife Fund, a request was made to seek Prince Philip's attendance for the centennial and NWA signing. "Buckingham Palace came back and said, 'Yes the Prince is available and yes, the Prince is interested in coming.'"

Along with the opportunity to have Prince Philip attend the ceremony at Last Mountain Lake, a Ramsar Convention on Wetlands of International Importance was scheduled to be held in Saskatchewan at the same time. "This conference proposed for being held in Regina was agreed to and it was another reason for Prince Philip to come in his role as President of the World Wildlife Fund. That year Canada nominated 12.8 million hectares of wetland toward the Ramsar Convention. At that time it was the largest commitment to wetland conservation of any of the members."

With a firm commitment by Buckingham Palace that Prince Philip would attend part of the two-week convention, Taylor was thrilled he would also visit Last Mountain Lake and make a stop at a farm east of Regina to see a Burrowing Owl nesting site.

However, before anything could take place, there were a number of rigorous meetings about Prince Philip's itinerary. Taylor said a planned itinerary had to be agreed upon between Buckingham Palace, the World Wildlife Fund and Canadian Wildlife Service at Last Mountain Lake. "We developed an itinerary and of course had to learn protocol as to what we did, when to shake hands and what to call him. Then we had to discuss things like security. Things like what we were responsible for, like ensuring the trails were safe and what route we would take. Then between the RCMP and Buckingham Palace, they took care of the security."

Considered as a working visit in his official role as President of the World Wildlife Fund, once the itinerary was approved for Prince Philip, then work began to design the June 5 ceremony itself. An open invitation was sent out to the public — including dignitaries, nearby neighbours, and students — to attend this ceremony commemorating the centennial and observing the signing of the NWA east of Simpson. Federal Environment Minister Tom McMillan and Provincial Minister of Parks, Recreation and Culture, Colin Maxwell, were also invited as signatories to the agreement to establish the NWA, while Prince Philip acted as the official witness.

In the June 10, 1987 edition of The Watrous Manitou, publisher Frank Wilson was one of the many members of the media who covered the event. With hundreds of people on hand during that Friday morning to catch a glimpse of Prince Philip, Wilson said The Duke of Edinburgh travelled to the site by military helicopter.

After touring a Burrowing Owl site 24 kilometres east of Regina and delivering an address at the Ramsar Conference Thursday evening, the following morning Wilson noted in

Photo credit: Environment and Climate Change Canada, 1987.

his article, "The Duke's arrival by helicopter was right on schedule at 9:30 a.m. at a landing area set aside near the speakers' dias. He appeared, as always, to be enjoying himself and walked along the edge of the waiting crowd, stopping here and there to chat and say hello. Applause and greetings accompanied him and cameras by the dozen received a good workout. As with any Royal Visit, there was an atmosphere of excitement and satisfaction at being able to see Prince Philip and, in some cases, to have a brief word."

After the Duke of Edinburgh's informal walk to the podium, Regional Director of the Canadian Wildlife Service Gordon Kerr welcomed those in attendance and introduced the official dignitaries, which included Prince Philip, the Honourable Tom McMillan, Minister of Environment Canada, Colin Maxwell, Minister of Saskatchewan Parks, Recreation and Culture, Ed Crawford, President of Canada Life Assurance Company, and Robert Bateman, a world renowned nature artist.

As part of the event, Wilson said McMillan announced an agreement had been reached between the federal and provincial authorities to bring an additional 3,000 hectares of land under federal protection, encompassing the bird sanctuary with a National Wildlife Area. With Prince Philip witnessing the signing, McMillan and Maxwell endorsed the document.

"What he did that day was he put his signature on an agreement that Saskatchewan and the Government of Canada, the two governments, committed to contribute all of the Crown lands at the north end of the lake towards making the Last Mountain Lake National Wildlife Area," said Taylor.

Following that, McMillan also announced that the Government of

Photo credit: Environment and Climate Change Canada, 1987.

Canada presented $1 million toward the World Wildlife Fund, of which Prince Philip was President. Maxwell, who originally came from Edinburgh, noted during the ceremony how pleased he was to be attending with The Duke of Edinburgh and that the coincidence of being from Edinburgh formed a happy association between himself and Prince Philip. He also emphasized the importance of the sanctuary at Last Mountain Lake and was thrilled with the new National Wildlife Area.

Also during the Friday morning event, Wilson stated Prince Philip was presented with an original painting by artist Robert Bateman depicting White Pelicans at Last Mountain Lake and also helped with the unveiling of a commemorative plaque, marking the centenary of the bird sanctuary.

Reflecting back on that day, Wilson remarked the lasting impression he retained was the huge turnout The Duke of Edinburgh attracted. "To my mind that was a tribute to his popularity and stature wherever he went. The media presence was absolutely huge and members of the public were bused in from various parts of Saskatchewan. Even the weatherman co-operated!"

As the official ceremony came to a conclusion, the Prince joined Philip Taylor, Clint Jorgenson, the RCMP driver and both provincial and federal ministers in a van as they drove through the bird sanctuary and newly created NWA to a pick-up point where a helicopter was waiting.

During the drive with Prince Philip, Taylor said, "We talked about the conservation programs, some of the rare birds coming through like the Whooping Cranes, the Peregrine Falcons and Burrowing Owls. He was very interested in the rare birds but he was also very interested in the common birds. We talked about some of the shorebirds that nested there in the summer. He asked very good questions, he was very polite and had a good sense of humour."

Taylor also shared a funny moment as he was chatting along with

Photo credit: Environment and Climate Change Canada, 1987.

Jorgenson and talking about the sanctuary's programs to Prince Philip. "I pointed over toward the horizon and said, 'If you look just beside that little hill.' The Prince looked at me and he said, 'Hill?' We both started to laugh because I then said, 'A Saskatchewan hill is a little bit smaller than the ones you are used to in Scotland.' He was very engaged and had a good sense of humour and he enjoyed it very much."

Even prior to the ceremony, Taylor noted how relaxed Prince Philip seemed to be, deviating from the official itinerary. "It was fairly typical of him that he had his own idea of how he wanted to do it. He left the helicopter, walked past some of the audience on either side who were cordoned off and waved to them. In front of the main platform where he was going to be seated, he went right down to the audience and shook hands with the students, school teachers and others. He spent a lot of time doing that which they loved. We didn't know how many people were going to come and they had been waiting a while to see him. When he was shaking hands and talking with the audience you could tell his security was a bit nervous."

Already a remarkable day in his mind, Taylor said Prince Philip's participation and witnessing the signatures and agreement to establish the NWA ended up becoming the pinnacle of the program of wildlife conservation activities across Canada that year.

"His signing and witnessing of the agreement was crucial. It elevated the whole program to Canada-wide importance. Without the Prince coming, many things would have happened with the centennial but it would not have struck a chord across Canada in the same way. There are so many impressions people have about Prince Philip when he is working as a consort to the Queen.

On this trip he was engaged, really interested in the wildlife and the questions he was asking were right down to why we were managing, what we were doing, working with our partners like Ducks Unlimited, the Wildlife Federation, Nature Saskatchewan and the community members around who were able to put cattle on to graze certain areas. He was really right into that and that impressed me."

As the van reached the designated pick-up point and Prince Philip concluded his tour of the area, Taylor said, "He got in the helicopter and apparently he flew the helicopter part way back."

Following the successful June 5, 1987 event, a thank you letter was received from Brigadier Clive Robertson on behalf of Buckingham Palace:

The Duke of Edinburgh has asked me to write to thank you for the most successful and interesting morning at The Last Mountain Bird Sanctuary last week. His Royal Highness was very pleased to unveil the plaque and to tour the area with its fascinating bird life.

Prince Philip was delighted to receive the picture from Robert Bateman and would be grateful if you could pass on his sincere thanks to the artist for the magnificent work which he is very pleased to have.

Thank you again for arranging such an interesting visit which was clearly very much enjoyed by all of us.

Reflecting back on that morning over 30 years ago, while the event took a tremendous amount of planning, Taylor, the now retired Habitat Biologist for Canadian Wildlife Service, remarked it was a highlight he would not soon forget.

"We set out a number of objectives for ourselves and the centennial was obviously a big one. Some of these things just fell into place. It was very exciting and even today thinking about it, it was like, wow that was pretty impressive. Even over the years of me coming down from Saskatoon virtually every week and spending a few days at Last Mountain Lake over that 30 year period, I met a lot of local people and so many remember that day. Either they had gone to it or their kids had gone to that event. It was for so many people a landmark day."

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PRINCE PHILIP'S 1987 CONTRIBUTIONS TO CONSERVATION IN SASKATCHEWAN

Dale G. Hjertaas
15 Olson Place
Regina, SK S4S 2J6

Lorne R. Scott
Box 995
Indian Head, SK S0G 2K0

Prince Philip addresses guests at the 1987 launch of Operation Burrowing Owl. Lorne Scott (left) and Dale Hjertaas (right) look on. Photo credit: Warren Hjertaas.

When Prince Phillip visited Saskatchewan in 1987, he gave a significant boost to four conservation efforts in the province. We wish to honour and acknowledge his contributions to Operation Burrowing Owl, creation of the Last Mountain Lake National Wildlife Area, recognition of Saskatchewan and Canada's contribution to the efforts to preserve wetlands of international importance, and Ducks Unlimited's wetland conservation program.

Prince Philip's visit was arranged through World Wildlife Fund (WWF) Canada in recognition of the centennial of wildlife conservation in Canada. 1987 marked the 100th anniversary of the creation of North America's first Migratory Bird Sanctuary in 1887 at the north end of Last Mountain Lake.[1]

Prince Philip came in his role as President of WWF International to speak at the meeting of the RAMSAR Convention on Wetlands of International Importance, which was being held in Regina. At this convention, Saskatchewan dedicated 63,500 hectares at the Quill Lakes to this international effort. This added to the 15,600 hectares of federal and provincial lands at the north end of Last Mountain Lake previously dedicated in 1982. At the time, Canada became the largest signatory to the RAMSAR, with more than 12,886,000 hectares of wetlands included under the convention. Prince Philip's commitment to international conservation efforts brought attention to Saskatchewan and Canada's leadership role in wetland protection.

WWF Canada, under Monte Hummel's leadership, had initiated the Wild West Program and was working with local conservationists to stimulate conservation action on prairie species. Prince Philip agreed to aid conservation efforts by attending the launch of Operation Burrowing Owl, the opening of the Last Mountain Lake National Wildlife Area, and to attend a fundraising banquet organized by Ducks Unlimited.

A 1986 survey of Burrowing Owl habitats in the Weyburn and Regina topographic map sheets[2] had shown that the Burrowing Owl population in southeastern Saskatchewan was relatively small, and that the habitats they were nesting in were being lost. We also learned that farmers knew the Burrowing Owl and liked the species but did not know it was threatened. The study recommended development of a habitat protection program.

Operation Burrowing Owl (OBO) was developed to protect Burrowing Owl habitats by creating awareness and support for owl conservation.[3] To do that, it was necessary that farmers and ranchers became aware of the Burrowing Owl as a threatened species and of OBO so they would report owls to OBO. This is where Prince Phillip made his major contribution. By attending the opening, speaking to the 600 people convened at Grant and Sheila Fahlman's Farm, and presenting the first OBO signs to eight landowners from different areas of the province, the Prince made OBO front page news in most of the weekly newspapers across the Burrowing Owl's range. Almost overnight, awareness of the Burrowing Owl's plight and of OBO rose. Hundreds of reports of Burrowing Owls were received. During the initial five years, 499 landowners enrolled in the program. Without Prince Philip's support, the OBO program would have developed more slowly and required much more effort in publicity and advertising to create awareness of the Burrowing Owl's plight.

In 1987, the area that is now the Last Mountain Lake National Wildlife Area consisted of a Migratory Bird Sanctuary and a Provincial Wildlife Management Unit on a mix of federal and provincial lands. While discussions on bringing the whole area into a National Wildlife Area were underway before Prince Philip's visit was planned, they were progressing slowly. Phil Taylor, then with Canadian Wildlife Service, and Dale Hjertaas, then with the provincial Wildlife Branch, recall Prince Philip's visit spurring the necessary work by both governments to transfer provincial lands to Canada and create the National Wildlife Area. While it may have been created anyway, it certainly moved forward more quickly because of Prince Philip's visit.

Prince Philip points to a Burrowing Owl chick being held by Dale Hjertaas during the launch of Operation Burrowing Owl. Photo credit: Warren Hjertaas.

Money is also important to conservation. While in Regina, Prince Philip attended a fundraising banquet at the Saskatchewan Centre of the Arts organized by Ducks Unlimited. Besides being the Guest of Honour at the banquet, Prince Philip agreed to be photographed with all successful bidders at the auction, which almost certainly helped raise bid prices. Many people flew in from other parts of Canada and from the United States to attend this very successful fundraiser, providing funds to help with Ducks Unlimited Canada's wetland conservation work.

Internationally known wildlife artist Robert Bateman donated a painting titled "American White Pelicans at Last Mountain Lake", from which the signed, limited edition prints were sold at the auction, aiding the fundraising effort.

As we remember Prince Philip's life, we also wish to share two small incidents from the Operation Burrowing Owl launch that show Prince Philip was both knowledgeable and very interested in the local wildlife.

During the OBO opening the official party — which included Prince Philip, Hon. Tom McMillan, Federal Minister of Environment and Hon. Gary Lane, Provincial Minister of Justice, and the two authors — walked from the yard into the pasture to see the Burrowing Owls nesting there. Everyone was, of course, wearing a jacket and tie. Keen as we are on birds, neither of the authors had binoculars with us but Prince Philip pulled a pair of binoculars from a pocket so he could have a good look at the owls. His interest was real.

We also opened a nest box. The plan was for members of the official party to each hold an owl chick and show them to the people at the event. Lorne Scott was pulling the chicks from the nest box. When he offered one to Prince Philip, the Prince said "No thank you." As some readers will know, and Prince Philip clearly knew, young birds, when disturbed, often defecate. Someone else took the chick, which promptly defecated in his hand. Prince Philip said, "Now I will take it" and the program proceeded. He was clearly familiar with this aspect of bird behaviour.

Prince Philip presents the first Operation Burrowing Owl sign to Grant Fahlman. Photo credit: Warren Hjertaas.

Prince Philip's recent death prompted us to write this reflection on his 1987 visit to Saskatchewan. He used his fame to move conservation objectives forward during his visit. We expect he had a similar positive impact on conservation during his visits in many other areas of the world.

Acknowledgements

We thank Phil Taylor for his recollections of Prince Philip's visit and thoughts on positive outcomes form that visit.

1. Various authors (1987) *Blue Jay* 45(4):187-280.This issue was devoted to centennial celebrations across Canada: Wildlife '87: Gaining Momentum.

2. Hjertaas, Dale G. and Wendy Lyon (1987) A Stratified Random Survey For Burrowing Owls On The Weyburn (62E) and Regina (72I) Map Areas. Wildlife Technical Report 87-2. Saskatchewan Parks, Recreation and Culture, Regina, Sask.

3. Hjertaas, D.G. (1997) Operation Burrowing Owl in Saskatchewan. Pp. 112-116 in J. L. Lincer and K. Steenhof, Eds., The burrowing owl, its biology and management including the proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9, Raptor Research.

WILDLIFE ‘87:
GAINING MOMENTUM

Joy Finlay received a plaque from Prince Philip for her work. Photo credit: Environment and Climate Change Canada, 1987.

Phil Taylor
Saskatoon, SK

The federal government designated 1987 as “a year of wildlife conservation” to mark the centennial of the establishment of the first bird sanctuary in Canada at Last Mountain Lake, Saskatchewan on June 8, 1887. Although the provincial and territorial wildlife ministers endorsed the idea, it was the non-government conservation groups that took the initiative and played a lead role in making *Wildlife ‘87* a success. Joy Finlay (nee Barton) of the Canadian Nature Federation chaired the initiative, taking on the huge task of coordinating participating nature, wildlife, and conservation groups across the country.

More than 160 conservation initiatives took place across Canada under the *Wildlife ‘87* banner. They included the establishment of new naturalist clubs, protecting new natural areas, giving the Boy Scouts of Canada a World Conservation badge, naming the Atlantic Puffin Newfoundland and Labrador’s official bird, and choosing Steller’s Jay for BC’s provincial bird.

Finlay’s remarkable enthusiasm and dedication made *Wildlife ‘87* a truly national celebration. She was presented with a plaque for her work by Prince Philip at the Last Mountain Lake Centennial event, and received the Order of Canada for her passion for outdoor education and wildlife conservation. Audrey Joy Finlay was born in Davidson, Saskatchewan. She died on May 27, 2021 in Victoria, BC. More details of her life can be found here: https://edmontonjournal.remembering.ca/obituary/audrey-finlay-1082605021

For additional information, please see the December 1987 edition of *Blue Jay*.

POETRY

Almost Dawn

The ascending sun just begins
To colour the western horizon
While high above a paring
Of ivory white moonlight
Is Mars alone, shining sun-bright.
Some stars, less than a handful,
And steadily going to darkness,
In the ebony, yielding to blue sky,
Feature in a pre-dawn
That even with one ambitious
Needlessly crowing cockerel,
Still burn in silent, piercing,
And so lonesome splendour.

George Grassick
Box 205
Lumsden, SK
S0G 3C0
ggrassick@sasktel.net

Nature SASKATCHEWAN

FALL MEET 2021
SEPTEMBER 18, 2021 MOOSE JAW, SK

AGENDA

8:30 a.m. Meet at Kiwanis Lodge area in Wakamow Valley for registration

9:00 a.m. Valley walk with presentation on local flora/fauna and bird checklist as well as bird feeding area

11:30 a.m. Lunch on your own

1:15 p.m. Meet at Nicolle Flats for walking tour and activities

3:45 p.m. End of activities; supper on your own if attending speaker presentation

6:30 p.m. Presentations, at the Kiwanis Lodge in Wakamow Valley, by 2020 Margaret Skeel Graduate Scholarship Winner Ajaypal Kahlon and from Moose Jaw Nature Society President, local naturalist and historian, Richard Pickering

8:30 p.m. Concluding remarks and wrap-up

PLEASE NOTE:
Due to the ever-changing nature of COVID-19 restrictions, these schedules are subject to change and space will be limited for the evening presentations

REGISTRATION FORM

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_____
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Information and Fees:
- Please complete the registration form. Registration is mandatory.
- Registration is limited. If capacity is reached before your registration is received, we will contact you.
- All meals will be on your own. A small snack will be provided.
- Registration fee (13 years and older) is $15 per person.
- Free registration for children aged 12 and younger.

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TOTAL AMOUNT DUE: $ _____

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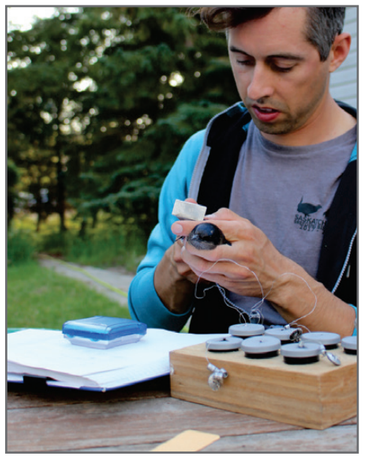
THE NATURE NOTEBOOK: INCLUSIVITY IN THE ENJOYMENT OF OUR NATURAL WORLD



Jared Clarke

I'll be honest — I struggled with pulling my thoughts together for this issue. I thought about writing about something easy like the Monarch caterpillars that have been munching our milkweed plants or the fireflies that I see each June on our farm. However, there is something more important that I think we need to talk about at this time — racism.

Now, before you stop reading because you feel this isn't the place that we need to talk about this, hear me out (because frankly if you are rolling your eyes about this right now, it's likely that you are exactly who needs to read this).

Racism is present in Saskatchewan like a deep-rooted noxious weed and it prevents and isolates people of colour who want to enjoy the birds, or various other aspects of nature. One just has to actually listen to the stories from people to realize this is the case here in this province. I have heard numerous jaw-dropping recounts of the racism some folks face on a regular basis.

However, it feels like there is a lot of momentum around awareness of inclusion of people in general in society, but also specifically in naturalist spaces. There are a number of examples that pop to mind, including the Bird Names for Birds movement, #BlackBirderWeek on Twitter and very recently the Treaty Land Sharing Network that recently launched in this province to allow Indigenous people a safe place to connect to the land.

I was birding out in the country for the Saskatchewan Breeding Bird Atlas this week. Two separate people stopped me and forcefully questioned me about what I was doing parked on a public gravel road… in my car… beside a wetland. Once I explained what I was doing they left me alone. I shudder to think about how those interactions would have gone if I wasn't white. I'm not sure I would feel safe birding in the country by myself on an isolated grid road if I wasn't white. For the record, this is a great example of white privilege.

So, the question is what are we all doing to make the spaces that we all just want to explore and appreciate nature more inclusive to everyone? Additionally, I think we need to look critically at our nature organizations and think about how these organizations can make field trips, meetings, etc. more welcoming to people of colour. Are there structural changes that need to happen to make these organizations more inclusive? We need to engage in an ongoing process of inclusion, that isn't just a one-off, but a sustained commitment.

Racism is learned. Let's unlearn it. Let's make enjoying nature a great experience for everyone, regardless of one's skin colour. We have a lot of work to do here in Saskatchewan. We need to acknowledge it and start making it better.

Jared Clarke is a grade 6/7 teacher and biologist who lives on a small farm near Edenwold, SK, with his family. He has been bird watching since the age of five after a Spotted Towhee visited his yard. Follow him on Twitter @jaredthebirdguy.

RECIPIENTS OF THE 2021 MARGARET SKEEL GRADUATE STUDENT SCHOLARSHIP

Each year, Nature Saskatchewan awards the Margaret Skeel Graduate Student Scholarship in the amount of $2,000 to assist a graduate student attending a post-secondary institution in Saskatchewan. The scholarship was established with the aim to stimulate research that will increase knowledge of all aspects of the natural world and human relation with nature, and to promote conservation of natural ecosystems and sustainable use of natural resources.

In 2021, two students were chosen as recipients of the scholarship — Mercy Harris and Kelsey Bell.

Mercy Harris

Kelsey Bell

Mercy Harris

My project, "Land Use and Foraging Habitat Effects on Neonicotinoid Exposure in Aerial Insectivores", focuses on identifying what factors affect neonicotinoid insecticide exposure in Barn and Tree Swallows. While it is known that there is widespread neonicotinoid pollution in Saskatchewan's landscapes, we are still learning about the extent of neonicotinoid exposure in wildlife such as swallows. As such, we need to address fundamental questions like "what drives insecticide exposure?" before we can begin considering potential effects of insecticide exposure. To begin filling these knowledge gaps, I will determine whether diet, foraging habitat, or local land use affect neonicotinoid exposure in swallows, with a particular focus on whether consumption of aquatic emergent insects versus terrestrial insects affects exposure. I hope that this work will not only allow us to predict neonicotinoid exposure in other species, but also more broadly increase our understanding of insecticide fate in agroecosystems.

Kelsey Bell

Someone once described me as "a bird specialist with a fish infatuation" and I think that was pretty bang on! Birds are my passion, but I am also an avid angler and enjoy challenging myself by targeting new species and trying new techniques and water bodies. In my spare time, if I am not birding or fishing, you can find me kayaking, hiking, and/or camping. I love to get outdoors and explore! In Winnipeg, where I am originally from, I volunteer at Fort Whyte Alive as a birding guide and I am heavily involved with Delta Marsh Bird Observatory, assisting with public events, workshops, and bird banding. I hope to eventually turn my passion for birds, outreach, and research into a career.

I originally took an interest in bird ecology and conservation during my undergrad at the University of Manitoba. At the U of M, I majored in biology, with a focus on environment and ecology, and graduated with a BSc. Honours in 2016. For my honours thesis research, I used archival GPS units (meaning we deployed the GPS units one year and retrieved them the following year when the birds returned) to examine wintering ground habitat selection of Purple Martins, a declining aerial insectivore. After graduating, I was fortunate to land a job with Bird Conservancy of the Rockies studying grassland birds in North Dakota. I worked on the project for several seasons studying grassland bird ecology and survival at both their North Dakota and Montana field sites. I grew very fond of the grasslands, and specifically the birds that inhabit them, so when the opportunity arose to study grassland birds in Saskatchewan, I jumped at the chance. I am currently pursuing a Master of Science in Biology at the University of Regina, under Dr. Stephen Davis (Canadian Wildlife Service) and Dr. Mark Brigham (U of R).

For my master's research, I will examine the extent to which cattle grazing can be used to improve habitat suitability for threatened grassland birds. Grassland birds are experiencing some of the steepest population declines compared to almost any other bird group. Threats to our native grasslands, such as conversion to agriculture and increased intensification of agriculture contribute greatly to the loss of grassland birds. Many croplands are being converted back to grasslands by planting them with tame grasses, which are then used for livestock production. Grassland birds will use these planted grasslands, when they have been mowed for hay the previous year. However, there is evidence suggesting these previously hayed planted grasslands are having negative affects on bird populations. For example, Sprague's Pipit, a grassland bird listed as Threatened under the Canadian Species-at-Risk Act, will use planted grasslands early in the breeding season, but, as the season progresses, the height and density of the vegetation becomes too great, and pipits do not re-attempt nesting after a failed attempt.

This inability to re-nest causes reduced reproductive success and can potentially lead to negative impacts on their populations. To best conserve and manage grassland bird populations, in an agricultural landscape, we must first understand how they use these human affected habitats and learn how the management of these areas might affect the avian community. I plan to determine if grazing planted grasslands, with cattle, will maintain a vegetation structure that more closely resembles the structure of native grasslands and therefore improve reproductive success. I consider myself lucky to be studying one of my favourite birds, the Sprague's Pipit, and I am hopeful that my results will help guide grassland management strategies to improve and maintain habitat for avian species-at-risk while at the same time maintaining the integrity of the land for cattle grazing.

NATURE SASKATCHEWAN WELCOMES NEW BOARD MEMBER DAVID WEIMAN

David Weiman

I like to think of my life to now as being quite diverse; in some ways as is our wish for bio-diversity in nature.

I was born and raised in Bruno, in the Parkland region, and spent a great deal of my spare time roaming the marshlands of the area. In 1978, I graduated from SIAST in Saskatoon with a diploma in Renewable Resources. I got a job as a Resource Officer in Cumberland House in a very different eco region — the boreal forest. I spent five years in that capacity, some of the time in Pelican Narrows where I experienced the sub shield where rock was our walking platform.

In the early '80s I bought a sporting goods store in Preeceville and spent 14 years in the boreal fringe area of our province. In the '90s and up to 2008 I spent my time horse logging and running an ecotourism business from my home north of Danbury right up against the Porcupine Provincial Forest. During this time, I also operated my registered trapline often using my team of Sib's. It was during this time I felt the closest to nature itself spending of lot of time "doing" rather than "wishing". I also spent some time during that period as a real estate agent, selling mostly recreational parcels and houses in small towns.

In 2020 I ventured back to the Parkland, moving north of Goodeve where I am now. I yearned to get back to the marshlands; in fact, I am nestled in amongst a block of Ducks Unlimited land. It truly feels like home and I am quite content to live in this area that truly has quite a diversity of wildlife considering how our land base in Saskatchewan is under constant state of alteration.

Home is where the heart is and my heart is here.

STEWARDS OF SASKATCHEWAN PROGRAMS WELCOME SUMMER STAFF FOR 2021

Each summer, the Stewards of Saskatchewan (SOS) staff are busy connecting with land stewards, surveying for species at risk, and promoting awareness of our disappearing prairie parkland landscapes and their biological diversity. This work is supported by hard working summer staff and, in 2021, we are very pleased to welcome Rachel Ward, Carmen LaBelle, Gillian Walker, Olivia Yurach, Spencer Lyons and Ashley Mills to the SOS team.

Rachel Ward, Habitat Stewardship Assistant

Rachel grew up in Calgary, AB and spent many summers on the family farm near Spalding, SK. This instilled a strong love of both mountains and prairies, as well as an appreciation for the incredible diversity of the natural world. Rachel completed a Bachelor of Science at the University of Calgary with a double major in Zoology and Ecology and is pursuing a career in conservation. Rachel will be working for Nature Saskatchewan this summer as a Habitat Stewardship Assistant. In her spare time Rachel enjoys camping, hiking, bird watching and training for dog sports with her chocolate lab.

Carmen LaBelle, Habitat Stewardship Assistant

Carmen grew up in Regina but has had numerous family farms and favourite camping spots to go to for adventures. She graduated in the fall of 2019 from the University of Regina with a Bachelor of Arts Degree in Geography, a certificate in Sustainability and with additional focuses in Geology and Geographical Information Systems. This is her first summer term working for Nature Saskatchewan as a Habitat Stewardship Assistant. She is excited to pursue and share her love of the environment and conservation, as well as to continually learn about her home province!

Gillian Walker, CWF Canadian Conservation Corps Program Volunteer

Gillian Walker came to Nature Saskatchewan as a volunteer through the Canadian Conservation Corps Program. They were born in Saskatoon, SK and pursued degrees in Mechanical Engineering and Secondary Education at the University of Saskatchewan. Gillian's favourite activities are learning and being outside. They have an unquenchable thirst for knowledge and new skills. In the past, they have predominantly been an explorer of Northern Saskatchewan via canoe, unless they are visiting the T.Rex Discovery Centre in Eastend, because they don't have *all* the plaques memorized. Gillian hopes to acquire a wealth of knowledge about prairie species to share with their future science classrooms and anyone who happens to make a comment adjacent to a fact they know.

Olivia Yurach, Rare Plant Rescue Assistant

I am very excited to be working with Nature Saskatchewan this summer. I have always enjoyed being outdoors and learning about the environment. I grew up in Saskatoon and I am currently halfway through my undergraduate degree studying environmental science. My family has always encouraged me to learn more about the prairies and I grew up doing lots of camping and canoeing in southern Saskatchewan. I was fortunate to participate in a hands-on program called Outdoor School in Grade 11 where we got to learn outside and explore Saskatchewan! Our trip to Grasslands National Park opened my eyes to the diversity we have here and sparked my passion for native prairie. I have learned so much already this summer and I cannot wait for the experiences to come! I look forward to meeting more stewards throughout the summer!

Spencer Lyons, Rare Plant Rescue Search Crew

I am Spencer Lyons, a new RPR crew member with Nature Saskatchewan. I recently convocated from the University of Saskatchewan with a Double B.Sc. in Biology and Archaeology. My love for adventure began when I was just a boy growing up in the aspen parkland region of Saskatchewan. To be a part of nature is the most rewarding experience on the planet and I hope to be able to share my love of the earth with the world. When I am not in the field, I love to 3D model, write about all the fun things I find and spend time with my best woofer Nyx. My passion lies in computational zooarchaeology and so I may be a little out of my element this summer, but I am having an absolute blast out in the backyard of Saskatchewan. Being a part of Nature Saskatchewan has been an incredibly rewarding experience and it's only just beginning. I cannot wait to see where this road takes me!

Ashley Mills, Rare Plant Rescue Search Crew

My biggest passion in life is learning about the natural world. My love of native plant species began when I worked as a horticulture technician with Meewasin Valley Authority. My eyes were opened to the vast diversity of native prairie species and the beauty of a landscape that I once thought only consisted of cropland. I later adventured North to Svalbard's arctic where I studied flora and fauna through a bachelor exchange program. In 2019, I convocated with a BSC in biology from the University of Saskatchewan. I have since worked as a red squirrel research technician in the beautiful Kluane region of the Yukon. I am now excited to be a part of the Rare Plant Rescue team with Nature Saskatchewan. I find great joy in learning new plant species and feel honoured to be working with such dedicated team of conservationists. I have big dreams for my future and look forward to my journey as a biologist/naturalist.

HUMAN NATURE

Elaine Ehman
Regina, SK

According to Nature Regina's website, "Since 1994 Nature Regina and the Royal Saskatchewan Museum have nurtured the native plant garden, a colourful oasis of natural beauty, at the south-east entrance of the museum at the corner of College Avenue and Albert Street." This little oasis has become my favourite place in Saskatchewan to enjoy and learn about native plants.

By 2018, the once-flourishing garden was only receiving a spring and fall cleanup and was looking unappealing to those who visited the museum. That's when Gail Fennell happened to arrive from Edmonton. She had been a longtime volunteer at a native plant garden in Edmonton and when she arrived in Regina, she was looking to continue working with native plants. To the astonishment of Nature Regina, Gail asked for five years to get the garden back in shape and immediately began recruiting volunteers. It just so happened that that's when I came along, knowing nothing about native plants but loving everything about gardening and being outside in nature.

My first day at the garden I told Gail I could weed with the best of them — I was proficient at recognizing dandelions and quack grass so "let me at 'em!" That quickly turned into trepidation as I realized there were a lot of native grasses in the garden that looked much like quack grass to me — away flew my confidence. Luckily, there were lots of dandelions to deal with. This year is my fourth summer and finally I can stroll through the garden with confidence knowing that I can easily identify a dozen or so native flowers, and with careful consideration, a few more. It seems that in all my years of growing cultivars, I've picked up a hint or two about identification.

In 2021, we are in the third year (fourth summer) of the five-year plan and each year the garden reveals old plant friends hidden within and once allowed a little room to stretch, have appeared for the first time in years. Our most recent count showed 89 native species of plants. The bees, wasps, ants, butterflies, moths, flies, spiders, and other insect life (80 species at last count) are happily discovering this haven. And the birders have spotted 46 species of birds in the garden, in the surrounding trees and shrubs, and passing over.

The garden fills with shrieks of amazement from the volunteer gardeners discovering "new" plants or new blooms, and laughter over our own continuous wonder. It is my happy place where I've discovered that you're never too old to learn new things. I feel so fortunate to have this wonderful spot within the city where I can observe the plants and wildlife so closely, guided by Gail and all the other knowledgeable volunteers. Every week is a new field trip! But I am able to give something in return: I am so happy to give plants needing a new home or just fostering a place to thrive in my own yard, and now that I've started growing my own plants, I can share seeds and plants with others.

Once again, the garden has become not only "a colourful oasis of natural beauty" but also a refuge of friendship and living wonder.

Elaine Ehman is a volunteer at the native plant garden and the past president of Nature Regina.

Nature Regina's native plant garden at the Royal Saskatchewan Museum.

A honeybee (*Apis mellifera*) at the garden.

Strawberry Blight (*Chenopodium capitatum*). All photos courtesy of Kim Mann.

MYSTERY PHOTO

Burdock heads of purple flowers surrounded by hooked bracts. Photo credit: Colleen Town.

Summer 2021 (top)
ANSWER: This plant is a burdock, one of three species of *Arctium* that grow in the Prairie provinces. All have heads covered in hooks that catch on clothing and fur and aid in dispersal of the seeds. They also attach to feathers; small songbirds can become fatally trapped if they come too close to a plant with many heads.

For additional information, please see the following *Blue Jay* articles:

Harms, V.L. (2001) Burdocks in Saskatchewan. *Blue Jay* 59(2). https://doi.org/10.29173/bluejay5673

Underwood, T. J., & Underwood, R. M. (2001) Observations on burdock-killed birds in King's Park, Winnipeg, MB. *Blue Jay* 59(2). https://doi.org/10.29173/bluejay5666

Photo credit: Robert Holtkamp.

Fall 2021 (bottom)
QUESTION: The cocoon of what North American moth is shown here? Hint: The cocoon is about 4 cm in length, and from this structure will emerge a beautiful creature that is named after a one-eyed monster of Greek mythology.

Please send your answers to the *Blue Jay* editor, Annie McLeod, by email at bluejay@naturesask.ca or by letter mail (address on page 4). Those with correct answers will be entered into a draw for a prize from Nature Saskatchewan.

Have you taken a picture that may make for a good mystery photo? Send it to the editor for possible inclusion in an upcoming issue.

Nature
SASKATCHEWAN

206 – 1860 Lorne Street
Regina, SK S4P 2L7

SASK LOTTERIES