



SPRING 2020 VOLUME 78.1

BLUE JAY





Lu Carbyn of Edmonton, Alberta reviews the book *Biodiversity Conservation in Canada: From Theory to Practice* by Dr. Richard R. Schneider.



Since 2007, the Manitoba Chimney Swift Initiative (MCSI) has conducted regular monitoring of roost and nest sites in communities across Manitoba. MCSI's observations have provided new information on habitat selection, notably in relation to nest site chimneys.



In her column, *Beyond Your Backyard*, Kimberly Epp discusses Mountain Bluebirds, their use of nest boxes, and the work the Moose Jaw Nature Society has done to give these birds a helping hand.



Charles J. Guignet's far-reaching contributions to the field of natural history in British Columbia have been chronicled extensively. Less well known is that Guignet's interest in natural history took hold in Shaunavon, Saskatchewan, where he was born in 1915.



Deanna Dodgson documents 21 Mottled Duskywing, a rare species of skipper, during a survey in Sandilands Provincial Forest, on June 24, 2019.



Shirley Bartz and Andrew Miller discuss Nature Conservancy Canada's Old Man on His Back Prairie and Heritage Conservation Area (OMB) in southwest Saskatchewan, including the opportunity they had to attend a meeting among First Nations of the region that occurred at OMB.

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FROM THE PRESIDENT

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ON THE FRONT COVER

"Springtime dancing shoes"

Photo credit: Randy McCulloch.



ON THE BACK COVER

An intermediate phase Swainson's Hawk chick (left) among its siblings.

Photo credit: Randy McCulloch.

Hello everyone,

Loss of habitat is always one of the substantial concerns in conservation work, and in Saskatchewan one of the greatest concerns is the conversion of wetland habitat in agricultural areas. It's a complex topic: drainage of wetlands is often driven by the needs of agricultural producers, but can have effects not only on wildlife but also on water quality, flood control and watershed management, and carbon capture.

An important step was taken recently in the Saskatchewan discussion of these trade-offs, with the 'Agricultural Drainage and the Environment' conference held in Regina in November. The conference brought together many different perspectives on the drainage issue, under an overall desire to create greater awareness of the issue, and of the need to find a balance between the needs of agricultural producers and the environment. The session included a chance for participants to express their opinions and suggestions, and provided a good example of how several local environmental groups can work together on a common issue.

The 'Agricultural Drainage and the Environment' conference was organized under the lead of the Citizens Environmental Alliance, but Nature Saskatchewan was one of several partner organizations that both helped to organize the conference, and participated in the discussions. The drainage issue, and the need to find a balance between



Ed Rodger

the needs of agriculture and the impacts of drainage, has created a lot of discussion among Nature Saskatchewan board members and staff, and we know it will continue to be an important part of our work.

The drainage issue has also got a lot of attention among other NGOs and government agencies. Besides the Citizens Environmental Alliance and Nature Saskatchewan, six other organizations participated in the preparation of the conference, and several others gave presentations. There are also initiatives at both the provincial and federal government levels that will involve work in this area.

If you're interested in this issue there are many references available online, and the information prepared for the conference provides an excellent overall view of drainage issues. If you'd like more information related to the conference or Nature Saskatchewan's participation, or would like to express an opinion as a Nature Saskatchewan supporter, please contact myself, Executive Director Jordan Ignatiuk at jignatiuk@naturesask.ca, or Conservation Director Lorne Scott at lorne.scott@sasktel.net. 🐦



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.

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Blue Jay welcomes all submissions, preferably by e-mail (although handwritten 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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BIODIVERSITY CONSERVATION IN CANADA: FROM THEORY TO PRACTICE

Richard R. Schneider. 2019. The Canadian Centre for Transitional Ecology. 364 pp. \$59.00

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Eugene Odum was the first to write a textbook in ecology, and it became a classic of its time — the 20th century. Times are changing.

Books are not what they used to be — the Internet has taken over. Dr. Rick Schneider's new book 'bucks' the trend. This book is as important as Odum's book, but is written for the 21st century. Instead of all theory, this book takes you from theory to the practical world and how to get the job done.

In *Biodiversity Conservation in Canada: From Theory to Practice*, we have an authoritative synthesis of biodiversity conservation as it pertains to species and ecosystems across Canada. Written in a clear and engaging style, and brimming with full colour figures and illustrative case studies, this book explains how conservation decision making is informed by science, shaped by social and political context, and embedded in a complex set of institutions. The subject is dealt with exceptionally well.

The intent of Dr. Schneider's book is that it is to be used as a teaching instrument. For undergraduates, it is meant to expose future practitioners to a broad overview of both the scientific and social dimensions of conservation. For graduate students, the book provides a way of moving from theoretical information obtained in classes to dealing, in a practical and meaningful way, with real world

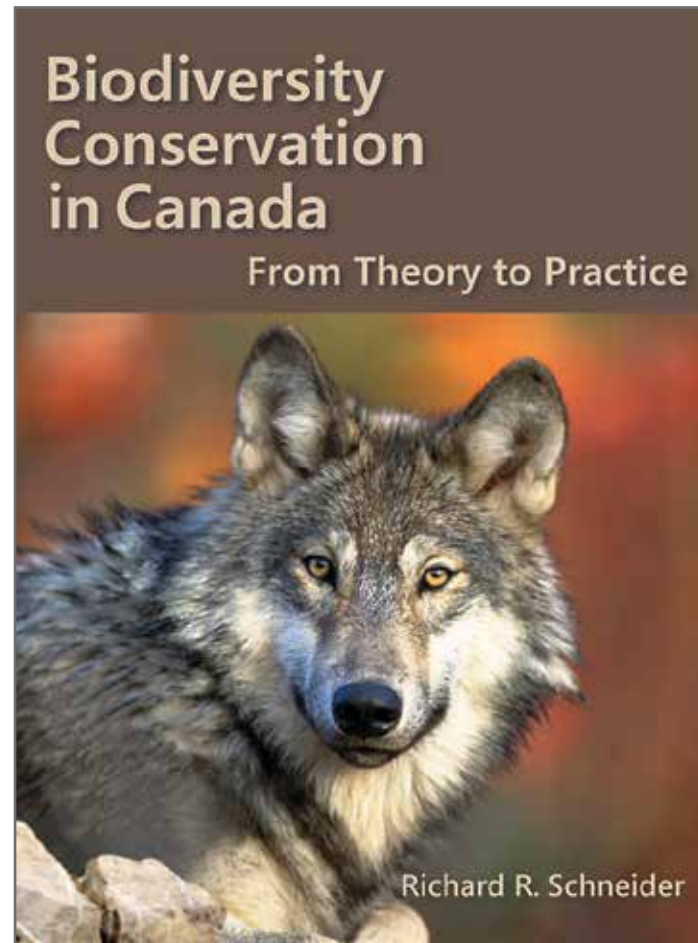
conservation problems.

I believe there is also an overarching contribution to a much broader audience. In addition to conservation science, topics include the history of conservation, threats to biodiversity, conservation laws and policies, climate change, and conservation decision making. The list goes on.

It occurred to me that much in this book could also be applied to high school curricula. In the very least, a copy could well be placed in every high school library in our country. I found the chapter entitled "The Historical Foundations of Conservation in Canada" particularly interesting. This book deals with Canadian issues. Many new Canadians have little exposure or knowledge about such important events of the past such as the fur trade in the 19th century and how it influenced Canadian history.

The book outlines, in a very clearly written and superbly illustrated manner, logical approaches to finding solutions to complex problems. There are often many different solutions to dealing with diverse problems, yet the various options are often not clear and this book covers the range that is available; it looks at the pros and cons of doing business in different ways. It has a no-nonsense common practical approach that I found so compelling.

Biodiversity Conservation in



Canada: From Theory to Practice represents applied biology at its best. Conservation practitioners, conservation organizations, government scientists, academicians, and people in all walks of life with an interest of our natural world can get a great deal out of this book. For an older biologist, such as myself, I am pleased to have — in one reference book — such concepts described as structured decision making, decision framing, adaptive management, climate change, and so much more. I highly recommend this book.

Learn more about *Biodiversity Conservation in Canada: From Theory to Practice* at www.ccte.ca. 🐦

IN MEMORIAM: DAISY DOREEN MEYERS

Daisy Doreen Meyers was born on September 8, 1941 in Empress, Alberta. She was the beloved only child of Glen and Lily Meyers. Daisy lived most of her life on the family ranch along the South Saskatchewan River. She helped her Dad in the fields and with caring for the livestock while growing up. She also had a tremendous love of nature and wildlife.

Daisy cared about the wildlife that lived on and passed through her land along the river. She was particularly fond of the birds such as the pheasants that stayed in her yard. Daisy also enjoyed watching and taking pictures of the woodpeckers, the chickadees, the noisy Blue Jays that came squawking for her peanuts, and the flocks of water birds that landed on the river.

Throughout her lifetime, Daisy's dogs were her constant companions and close family. Her more recent dogs, Happy, then Tripper and Joey, went with her everywhere. In the last two years, sister Red Heelers, Sage and Rio, were her house mates and partners for trips to town. She fondly referred to them as "the girls".

Daisy had no TV or Internet but kept herself entertained by completing puzzles, even working on a 1,000-piece puzzle during the winter of 2018-19. She also enjoyed reading books as well as the Western Producer from cover to cover every week. Daisy used



her cell phone often and even became adept at texting in recent years.

Daisy valued time spent outdoors and participated in annual bird watching and bird counting. She went hunting every year for a deer or two to fill her freezer for the winter. She was a proud but humble woman who was never one to brag. She loved her new home that she had built the way she wanted.

Daisy was also strong willed. When her home was being built, she insisted that the caragana bush must stay for her birds, despite being in the way of the builders. Daisy was very independent as

well. She had told family that her Dad insisted she pay for her own tires and oil for her truck while she was growing up. That might have been the start of her streak of independence. Daisy took over the farming and livestock chores after her father's passing.

Daisy was also a caregiver. Longevity ran in her family, as her father lived to age 92. Her mother lived for 102 years. Daisy cared for her mother at home for many years before Lily went to the Western Senior Citizens Home in Leader. She was also the caregiver for Uncle George Meyer and helped out with his financial affairs.

Those close to Daisy enjoyed her dry sense of humor. Daisy loved being teased and was always ready to return the teasing.

On March 29, 2019, Daisy was diagnosed with stage 4 cancer and was hospitalized in Leader until her passing on April 11, 2019. She went on several road trips during her illness, for an ultrasound, CT scan and a trip by ambulance to Royal University Hospital in Saskatoon. When Daisy was asked if she would like to go on another road trip, her quick reply was "Not today!"

Daisy will be remembered for her humble kind nature and her love and compassion for all God's creatures whether human, furred or feathered. She will also be remembered for the gift she left to Nature Saskatchewan — a quarter section of land along the river. 🐦

SPRING MEET 2020 PREVIEW

JUNE 12-14, 2020
MOOSE JAW/AVONLEA, SK

Friday, June 12

Refreshments will be available:
coffee, tea, meat/cheese/
crackers, veggies

6:30 p.m. Registration
and refreshments at Heritage
Inn in Moose Jaw

7:30 p.m. Speaker TBA

8:30 p.m. Logistics
and program outline/instructions
for Saturday

Saturday, June 13

Family friendly activities
planned throughout the day in
partnership with SaskOutdoors

8:30 a.m. Board bus
to depart from Moose Jaw
to tour at Missouri Coteau,
completing at the Claybank
Brick Plant

12:00 p.m. Lunch break
at Claybank Brick Plant

1:00 p.m. Tour
of Avonlea badlands

5:00 p.m. Cocktails

6:00 p.m. Banquet

7:00 p.m. Speaker TBA

Sunday, June 14

Breakfast on your own

**9:00 a.m. Annual General
Meeting** at Heritage Inn in
Moose Jaw

SUGGESTED ACCOMMODATIONS

Heritage Inn

Block reserved under 'Nature
Saskatchewan' until May 12
1-888-888-4374 (toll free)

Best Western Plus

1-800-780-7234

Temple Gardens Mineral Spa

1-800-718-7727

Additional details, and a
registration form, will be available
in the next issue of *Blue Jay*.

5TH ANNUAL CHRISTMAS

Rebecca Magnus

Acting Conservation & Education
Manager, Nature Saskatchewan

Nature Saskatchewan and Wascana Centre hosted the 5th annual Christmas Bird Count for Kids (CBC4Kids) on Saturday, January 4 at Wascana Park in Regina. The

CBC4Kids is a fun, family-friendly birdwatching event that promotes nature appreciation, environmental stewardship and citizen science.

Nearly 120 participants had the opportunity to learn about birds, connect with other like-minded youth and families, and become citizen scientists for the day!

The event began with a brief introduction on birdwatching then groups followed their guides to count as many birds as they could along a mapped route. After the count, participants enjoyed snacks, such as cinnamon buns and hot chocolate, while talking about the birds they saw or colouring the many



BIRD COUNT FOR KIDS

wildlife pictures laid out to colour. Once all the groups returned, Living Sky Wildlife Rehabilitation gave a presentation with Loki the Crow and a couple of his friends. It was so wonderful to have the participants see Loki up close, and learn about his story and how he contributes to nature. Many participants even got

to hold him for a picture!

All youth received a certificate and sticker in recognition of their participation. A number of the participants said this was their fourth or fifth bird count, which supports the need to continue this CBC4Kids for years to come. The following is a summary of the observations:

Total number of species observed	12
Total number of individuals observed	392
Mallard	197
Canada Goose	57
Black-billed Magpie	49
Rock Pigeon	29
House Sparrow	25
Black-capped Chickadee	24
Red-breasted Nuthatch	6
Downy Woodpecker	1
Merlin	1
Brown Creeper	1
Wood Duck	1
Cackling Goose	1



All photos courtesy of Ellen Bouvier.

OCCUPANCY OF UNCONVENTIONAL NEST AND ROOST HABITATS BY THE CHIMNEY SWIFT (*CHAETURA PELAGICA*) IN MANITOBA

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The Chimney Swift (*Chaetura pelagica*, Figure 1) nests in chimneys throughout deciduous-dominated habitats east of the Rocky Mountains.¹ Manitoba and Saskatchewan are at the northwest periphery of the global breeding range of this species.² In Manitoba, swifts breed from the southeast of the province as far north as The Pas.³

This species has adapted to urbanisation by nesting in chimneys, although the Chimney Swift is still known to nest in large, hollowed out, dead trees in deciduous forest.¹ Nesting chimneys in Manitoba are usually at least 40 cm across inside although some are as small as 30 cm across.⁴ In the southern parts of their breeding range, Chimney Swifts have successfully nested in artificial towers.⁵ However, despite considerable efforts to replicate these artificial towers in Manitoba, there has been no recorded use of the original design, let alone successful breeding attempt observed.⁴ The reasons for such failure likely reflect the inability of these towers to maintain a relatively stable



FIGURE 1. Chimney Swift. Photo credit: Christian Artuso.

temperature when compared to chimneys, most notably in May and early June when swifts are selecting nest sites.⁴

Breeding Bird Survey estimates suggest that the Chimney Swift population has declined by 95 per cent between 1970 and 2005 in Canada.⁶ The reasons for such a decline are varied and complicated. In Manitoba, 14.5 per cent of 200 known chimney sites were either capped, lined or demolished between 2007 and 2016⁷, although studies suggest that loss of habitat is not significant in other jurisdictions.⁸ Chimney Swift rates of decline are similar to those experienced by

other long-distant aerial insectivores, bringing forward the suggestion that population declines are linked to the use of pesticides.^{1,9} Long-term nest monitoring in St. Adolphe, south of Winnipeg, suggests that hatching and fledging rates in Manitoba are low, and that severe summer storms increases the rate of nest failure.¹⁰

Since 2007, the Manitoba Chimney Swift Initiative (MCSI) has conducted regular monitoring of roost and nest sites in communities across Manitoba. The assumptions used to identify Chimney Swift habitat have been formalised in documents prepared by the Manitoba Chimney Swift Initiative



FIGURE 2. Damaged pest exclusion screen accessed by Chimney Swifts in Winnipeg. Note the spark arrestor is covering a lined flue and the exclusion cage is over an open flue. Photo credit: Timothy Poole.

from observations and analysis of data produced by around 100 annual volunteers.⁴ In identifying habitat for Chimney Swifts, MCSI has operated under the following general assumptions:

- Chimney Swifts only occupy unlined brick chimneys with internal dimensions of 30 cm square or more;
- Chimney Swifts avoid chimneys with any type of liner;
- obstacles on the chimney entrance are a hindrance to use by swifts;
- almost all communities containing Chimney Swifts are known to MCSI and its partners, but not all chimneys are known.

However, since 2016, the MCSI has documented numerous cases in which these assumptions do not hold.

Methods

MCSI volunteers participate in the National Roost Monitoring Program (NRMP) which takes place on four evenings each spring. While programs in other provinces focus on roosts in spring, MCSI focuses more on nest sites through the full season and volunteers are constantly on the lookout for new sites. MCSI volunteers are encouraged to search for new potential chimneys. Indeed, regular monitoring has built a cadre of observers who look everywhere and discover odd things.

Monitors watch the chimney for a set period, recording the times when swifts enter or leave the chimney site. Nesting chimneys are defined against roosting chimney via the level of daytime use. Volunteer monitors submit observations on monitoring forms. This information has been

used to identify Critical Habitat under the Manitoba Endangered Species and Ecosystems Act, and to inform stewardship activities by MCSI.⁷

The following observations are taken from reports by volunteers from MCSI.

Results

Use of 'Screened' Chimneys

It is commonplace for many building owners to restrict access to the interior of a chimney by installing a screen over the top. It is our supposition that most building managers target the exclusion of mammalian and larger avian species, especially Raccoons (*Procyon lotor*), and the Rock Pigeon (*Columba livia*). One type of screen takes on the form of a five-sided cage, which is attached to the top of the chimney, thus preventing access by larger animals, including the Chimney Swift.

On June 8, 2018, a volunteer was monitoring a known conventional brick roost chimney on Portage Avenue, Winnipeg. It became apparent during the evening that there were two distinct groups of swifts feeding in this area, one on the north side of Portage Avenue near the known roost, and one on the south side where there were no known Chimney Swift nest or roost sites. The volunteer investigated in the hopes of finding a new site on the south side. At 21:00 h, an adult swift was observed removing a twig from a Manitoba maple (*Acer negundo*) and appeared to drop into a previously unrecorded chimney on the south side of Portage Avenue (twig gathering is a sign of nest building¹¹). On closer inspection, the chimney appeared to have two flues, one being lined with metal and capped using a spark arrestor, and the other having a pest screen (Figure 2). At 21:36 h, two Chimney

Swifts entered the chimney through the screen. By doing so they revealed that there was a hole in the screen due to corrosion and age. Another swift attempting to enter through this screen at 21:40 h appeared to make contact, deflected off the screen, made a second pass, and entered the chimney.

While still watching the same group of birds, the volunteer noticed two Chimney Swifts entering a chimney on a taller apartment building nearby at 21:55 h. This chimney had two flues, one open, and one with a pest exclusion screen. The swifts were observed entering through a hole in the pest exclusion screen, and not into the apparently open chimney.

Both these chimneys were monitored later in the summer. At the first site where nest building behaviour had been noted, behaviour indicating the parents were tending young on August 5, 2018 confirmed this as a nesting site. The other screened chimney hosted 10 roosting Chimney Swifts on August 8, 2018. In addition, four other chimneys with broken pest exclusion screens were occupied by Chimney Swifts in 2018, all in Winnipeg, although detailed data are not available.

Removing the Cap from a Chimney

A large chimney on St. Avila School in Fort Richmond, Winnipeg had been used as a roost and nest site in 2009 and 2011 before it was capped with sheet metal c. 2014. The cap blew off in a windstorm in 2016 and a breeding attempt was made by swifts in 2016. Unfortunately, observations by MCSI volunteers suggested that the breeding attempt failed in August 2016.

In late April 2018, a chimney on the Fleetwood Apartments in

the Wolseley neighbourhood of Winnipeg was lined with a metal sleeve during upgrades to the boiler system. MCSI observations had recorded breeding attempts in this chimney from 2013 to 2017. Manitoba Sustainable Development discussed this loss of habitat for Chimney Swifts with the building owners and it was agreed removal of a pest exclusion screen from another chimney on the building would be appropriate mitigation. This screen was removed in May before Chimney Swifts returned to Manitoba. Follow-up monitoring on June 4 recorded a pair of Chimney Swifts entering the



FIGURE 3. Two chimneys at St. Ann's Church, Winnipeg. The chimney in the foreground has two flues. In the foreground is an open flue, and the spark arrestor covers a closed flue. The chimney to the right is two bricks wide only. Photo credit: Timothy Poole.

chimney. Observations made during the day on July 27 confirmed that a breeding attempt was underway inside the chimney. The chimney was also occupied by swifts in 2019.

Double-flues

Of the chimneys on churches and presbyteries in Quebec, over 50 per cent were closed to swifts by the installation of a spark arrestor or hat which prevents access to the chimney.⁶ Observers may assume that the presence of sheet metal on top of a chimney is indicative of capping but in some cases, a chimney may have a second open flue.

In July 2015, a Chimney Swift was observed using the second chimney at St. Ann's Roman Catholic Church on Hampton Street, Winnipeg, even though there appeared to be a spark arrestor and hat preventing access. On closer inspection, it was apparent that the top only covered one half of the chimney, leaving a separate flue open for swifts to access (Figure 3). There is also no suggestion that the presence of a tall object on the chimney was deterring swifts from accessing the open flue. This same pattern has been observed in several other chimneys in Winnipeg, Melita, and Portage la Prairie, and in London, Ontario.¹



FIGURE 4. Inside of clay-lined chimney at Trinity United Church. Photo credit: Gordon Ogilvie.

Clay-lined Chimneys

Clay-lined chimneys provide a poor substrate for Chimney Swifts to grip and are therefore considered as less suitable than brick chimneys.⁴

The clay-lined chimney on Trinity United Church in Portage la Prairie is no longer operational and is lined with a 35 cm by 35 cm square liner. An inspection through the chimney cleanout demonstrated that the clay-liner continued throughout the chimney and consisted of individual clay pots measuring approximately 90 centimetres tall. Each pot was fixed to the adjacent tube using mortar (Figure 4). This chimney sits adjacent to a second brick chimney on the church, which is regularly used by a breeding pair.

On May 29, 2016, a single Chimney Swift was observed entering a clay-lined chimney at Trinity United Church. A single bird was also observed roosting on June 1 and June 6, 2016. In 2017, one or two Chimney Swifts roosted in this same chimney throughout the breeding season, although no evidence was found to suggest that the birds are breeding.

On July 26, 2017, the same observer noted a single bird roosting

in another clay-lined chimney at Olina's Jewels on Saskatchewan Avenue, Portage la Prairie. On August 2, 2017, two birds roosted in this chimney. Unlike the Trinity United Church, this chimney is an outlet for the buildings current heating system and the clay pots are rounded. No evidence of a previous nesting attempt, including twigs, or parts of an old nest, was found in either chimney suggesting that they are being used as an alternative roosting site by non-breeding birds.

It is our belief that the mortar seams may act as a ledge for adult swifts to cling to, and possibly even to attach a nest.⁴

Potential roosting and nesting has been observed in other apparently clay-lined chimneys in Winnipeg (MCSI, unpublished data) and Orilla, Ontario (Robert Stewart, pers. comm.). However, it is our conjecture that for nesting to occur in these sites, there would need to be either a partial clay-liner that only inserts partway into the chimney, or sufficient deterioration of the clay-liner to render the surface of the chimney wall rough enough for pre-fledgling juveniles to 'walk' around.^{4,7}

Chimney Pots

On June 21 2016, a Chimney Swift was observed entering one of five clay pots on a chimney on the Granite Curling Club in Winnipeg. It was believed that the swift was part of a breeding attempt. This was the first observation in Manitoba of a swift using such a chimney (Figure 5) It is however known that Chimney Swifts often enter chimneys through smaller entrances than the internal dimensions, most notably using rain shields on artificial towers in the USA⁴⁻⁵.

Smaller Chimney Dimensions

Chimney Swifts were previously known to breed only in chimneys with a minimum internal of at least 30 cm square, which approximates to an external dimension of 2.5 bricks.⁴ The chimney on St. Ann's church on Hampton Street, Winnipeg, has been watched since 2014, and regularly hosts a breeding pair of swifts. In 2015, the chimney was condemned for demolition due to its poor state of repair. Instead, MCSI found the funds to have this chimney repaired.

The chimney had been surfaced with stucco. On removing the stucco, it was apparent that the chimney



FIGURE 5. Chimney at the Granite Curling Club with multiple clay pots. Photo credit: Timothy Poole.

POETRY

Correction

A Cooper's Hawk races
pell mell
across an open field
only eight, maybe ten
feet above the earth.

An updraft from an old
dried out slough
cants him nearly
onto his back.

With two powerful strokes
of his scimitar wings
he rights himself
to accipiter form

And continues
his headlong dash
for food, for fun.
Perhaps both.

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was only two bricks square, giving an internal dimension of 20 cm and an external dimension of 40 cm (Figure 3). Similar-sized chimneys have been used by swifts elsewhere in Manitoba, most notably in Souris.

Searching for Chimney Swifts in New Settlements

GIS analysis of MCSI data suggested that Chimney Swifts select human settlements within 2 km of running water, in areas subject to minimal insecticide use, and in which average house age was >50 years (built prior to 1970).¹³ This analysis generated a list of 145 settlements that had potential habitat for Chimney Swifts. In 2018, MCSI asked volunteers to check for potential Chimney Swift breeding habitat in these settlements, and for observations of swifts. In total, 46 towns were visited on at least one occasion, and of these, six were occupied by Chimney Swifts (Morden, Neepawa, Lockport, Pilot Mound, Baldur and Birtle). Chimney Swifts were also recorded in two additional settlements not previously known to host breeding swifts (Dominion City and Eriksdale). Potential breeding habitat was located in all these communities, although active sites were only identified in Morden, Lockport, Dominion City and Eriksdale.

Nesting Attempt on the Ledge of a Cleanout and Boiler Duct

Many chimneys are accessed through the cleanout trap.^{4,10} MCSI received a call from a building manager on Valhalla Drive in the North Kildonan neighbourhood of Winnipeg on July 24, 2018. Concern had been raised by the caretaker over the presence of Chimney Swifts found in the cleanout trap of the chimney. On arrival at the building, it

became apparent that the Chimney Swift adults had built their nest on the ledge of the cleanout trap near the base of the chimney. One chick remained in the nest, and a second was resting on the floor of the cleanout, which was situated at least one floor above the base of the chimney. The cleanout was resealed, and volunteers from the MCSI confirmed that adult swifts had continued with their feeding visits via direct observations.

Nesting material and guano had previously been found on the surface of a duct in a chimney in St. Adolphe (Barbara Stewart, pers. comm.). Our initial assumption was that swifts glue their nests to the vertical rough surface of the chimney. We speculate that a mortar ledge in a tiled chimney might provide suitable substrate for nesting.

Discussion and Conclusion

Our observations have provided new information on habitat selection, notably in relation to nest site chimneys. As a result, MCSI has been able to add numerous new sites to its database. In 2017, MCSI added 37 new chimneys to its database, of which 30 were occupied on at least one occasion by swifts. In 2018, 48 new sites were added, 33 of which were occupied on at least one occasion by swifts. Of these chimneys, five in 2018 were found in communities that had no previous records of Chimney Swifts (MCSI, unpublished data).

Of particular note, 348 Assiniboine Avenue in Winnipeg was a two-flue chimney. One flue was covered, with a damaged pest exclusion cage, and the other was clay-lined. In August 2018, Chimney Swifts were observed moving between the two flues. This type of behaviour has been observed in St. Adolphe, where a brood leaves

the natal chimney and takes up occupancy in a different chimney (Barbara Stewart, pers. comm.). In this case, we can speculate that the brood had left the natal flue, with the damaged pest control cage, and the young were exploring the clay-lined flue. Novel nesting habitat has been observed in other parts of this species range, for example, in Texas, where Chimney Swifts have nested in a shopping centre sign.⁵

These observations suggest that there is potentially more habitat available to breeding swifts in Manitoba than was previously assumed. The implications for the conservation of this species are significant, as this species can select what is likely to be many more nesting sites.

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POETRY

Prelude

The throngs Of house sparrows

Chirp so melodically

To the cadence of the chickadees

Percussive chip-chip-chip.

Their choirmaster a bold,

little, puffed-up cock

The last to flutter off

As I walk by.

Beyond the sighing windbreak

The red bull croons his

Strong, reverberating

bassoon pitch

To his many loves.

All in preparation for

The featured performers

The ever present, yet furtive

Coyote Chorus

And their constant and

Ever changing

Song Of The West.

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BEYOND YOUR BACKYARD: BLUEBIRD BOXES ARE QUITE POPULAR REAL ESTATE

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Mountain Bluebirds are a beautiful, yet sadly declining species. They are cavity nesters, which is why putting out nesting boxes each spring (early March) helps them out. These birds pair up in late fall and winter. They migrate from the States

and, unlike other bluebird species, they prefer the open terrain. The males are bright blue and females are a drabber brown. Males are bright and colorful to initially attract their mate, and then to detract predators from the nest and the young. Four to eight eggs make up the clutch, and there may be one to three clutches per season. Generally, one egg is laid

each day.

Mountain Bluebirds generally migrate together in flocks of about 100 birds. With fewer nesting cavities available due to habitat loss, nesting boxes are a great option. However, you cannot just build one (or more) and then not maintain them. Last year, we found some boxes that hadn't been maintained in years. Tree Swallows also like raising their broods in these boxes. One box had two sets of Tree Swallow nests, one of which was built above two dead adult swallows. And because the mites/infected feces infected the box contents, those swallows died as well. The cleaning process is explained below. It is also important to point out that bluebirds will not use boxes that are not cleaned out.

Earlier this year, I wrote a post requesting bluebird box builders and the good people of Moose Jaw came through. In early March, the Moose Jaw Nature Society (MJNS) will be holding a building bee, and two weeks later we will be heading out to clean boxes and replace worn out boxes. We have enough builders, but can always use more bird house cleaners and box replacers. Because of the risk of mites, the boxes need to be emptied completely each year. Using gloves, a mask and an old brush, sulfur is spread and then brushed out.

Bluebird couples wait patiently as their human servants clear out their condos. Last year, one was claimed almost before the final screw was tightened. You can expect some drama in an area where there are few nesting holes, and several species who would love to have their own home. They are no different than us. I'm sure the new boxes will



This male Mountain Bluebird and Least Chipmunk face off and, as it turns out, 'squatters' have no rights in nature. Photo credit: Michael St. Laurent.



"Time for eviction, young fellow!" Photo credit: Michael St. Laurent.

be the first to be claimed!

In March 2019, one week after four of us volunteered to clean out the bluebird boxes that Kelly Wiens had been caring for at Buffalo Pound Provincial Park for several years, local professional wildlife photographer Michael St. Laurent headed to the area. He wanted to see if he could photograph some paired Mountain Bluebirds. Well, he got a show he totally unexpected.

He had his tripod set up and his sights set on a box that seemed to have some activity within and around it. If you can imagine his surprise, out popped the cute little face of a tiny Least Chipmunk who was also looking for a suite for his family. Well, papa bluebird was not to keen on that. Whether or not 'squatters rights' can be claimed in this instance, Mr. bluebird knew the home was built for him.

The male bluebird grabbed the tiny Least Chipmunk and threw him to the ground. There were certainly no niceties. Mike then switched to video mode as both the male and female bluebirds chased that poor chipmunk so far that I'm sure that

little guy will think twice before he tries to take on a bluebird box as a home again. In my perfect world, there would be nesting boxes for chipmunks, too.

What is the status of Mountain Bluebirds? Although they are still considered fairly common, populations have declined by about 26 per cent in just six decades, according to the North America Breeding Bird Survey. Let's continue to give them a helping hand. I think that they are doing better because of us!

The MJNS would like to thank Kelly Wiens for his many years

and countless hours of hard work building bluebird houses, cleaning houses, and maintaining the houses in the Buffalo Pound Provincial Park area — as far as I know, it was 50 or more boxes. He also maintained the Wakamow feeder. We have now taken these duties off of his hands, but will need many willing volunteers for the bluebird boxes. We have fun, stop to take photos of the bluebirds and crocuses, and get to know other naturalists. It's work, but it's enjoyable work. Plus, you will almost always see cottontail rabbits, deer, bison, porcupines and various birds.

The MJNS meets monthly, on the fourth Friday, at St. Mark's Church. In addition, we meet throughout the year for guided hikes, trips, programs and workshops. All that for a membership fee of \$15 for individuals, \$5 for a child, or \$25 for a family. Rich Pickering is our President and he has some exciting speakers coming up at for our meetings in 2020. He and I will also be collaborating on some more family-friendly public programs. All visitors are welcome to all programs. Take only pictures, leave only footprints, and keep only memories.

Epp is an Environmental Educator and writer and is also the Past President and current Programs Director for the MJNS. 🐦

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with Dr. Branimir Gjetvaj

<p>Croatia photo tour October 4-17, 2020</p>	<p>Great Sand Hills photo workshop June 5-7, 2020</p>
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CHARLES J. GUIGUET'S BOYHOOD ACTIVITIES AS A NATURALIST AND COLLECTOR AT SHAUNAVON, SASKATCHEWAN

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Charles J. Guiguet's far-reaching contributions to the field of natural history in British Columbia — focused particularly on seabirds and insular mammals — have been chronicled extensively.¹⁻³ Less well known is that Guiguet's interest in natural history took hold in Shaunavon, Saskatchewan, where he was born in 1915, shortly after his parents immigrated to Canada from France. By the time he graduated from high school in Shaunavon in 1935, his interest in the natural world had developed, initially under the influence of supportive parents. In his spare time, Charles's father, Laurent Guiguet, a carpenter and painter, assembled a collection of insects, mostly butterflies⁴, to which the younger Guiguet contributed, but most of his activities focused on collecting birds and mammals. These led to an interest in museums, whereby Charles eventually parlayed his experiences into a lifelong career as a field biologist and museum curator, in British Columbia, to where his family moved in 1936. Guiguet's boyhood activities as a naturalist and collector, strongly supported by teachers at his school and staff of the local museum, and influenced by established naturalists and ornithologists, provide a glimpse into the state of natural history in southern Saskatchewan nearly 100 years ago.

A Naturalist in the Making

Guiguet's collecting activities in Shaunavon were undertaken in association with his teachers at the local school and the staff of the recently opened Grand Coteau Museum (GCM, now Grand Coteau Heritage & Cultural Centre; hereafter Museum). In the winter of 1932, the Museum engaged the services of a taxidermist, Frank D. Steffan, who quickly set about augmenting the Museum's exhibits.⁵ Realization of the need for additional mounted specimens, Steffan instructed a group of local boys, including Guiguet, in the art of taxidermy. Charles quickly showed promise, winning first prize in a taxidermy contest held early in 1932, the year following the opening of the Museum.⁶ One of the founders of the Museum, and the judge of the contest, was Charles F. Holmes, a pioneer naturalist-rancher who homesteaded south of present-day

Dollard, just west of Shaunavon.^{6,7} The winning mount "was an ordinary white pigeon, mounted with its wings outspread as if ready for flight."⁶ In commenting on this specimen, Holmes called attention "to the immaculate work which had been done, not one blemish appearing on the bird, and also to the fact that the mounting of the bird with wings outspread was always more difficult to do than in any other posture."⁶ The number and identities of the birds and mammals Guiguet mounted for the Museum and his school is not known because of a dearth of records, but his Coyote (*Canis latrans*) is currently on display (Figure 1), as are at least two birds, an albino Gray Partridge (*Perdix perdix*) and a Merlin (*Falco columbarius*).

Pivotal to Guiguet's early development as a naturalist and curator were two visits to Shaunavon by James A. Munro, ornithologist and



FIGURE 1. Coyote (*Canis latrans*) mounted by Charles Guiguet is on exhibit at the Grand Coteau Heritage & Cultural Centre, Shaunavon. Photo credit: N.L. Sealy.

Federal Game Officer for the western Canadian Provinces, and prodigious bird collector.⁸ In June 1931, Munro addressed students in Grades 5 to 10 in the local school on the economic value of birds, showing slides of nests of several species of Canadian birds and their habitats.⁹ Charles was in Grade 10 and was undoubtedly among those present. One may imagine the effect of Munro's talk on young Charles. Less than a year later, he won the taxidermy contest held at the Museum and, in 1933, a second opportunity arose for the boys to meet with Munro.¹⁰ This time, Munro was a guest at the Holmes homestead during one of his tours of inspection of waterfowl habitats on the Prairies.¹¹ Probably arranged by Holmes, Munro showed Guiguet and other boys how to properly prepare study skins for permanent storage in a museum for scientific study.¹⁰ It has been stated that the specimen used for instruction that day was a Black-footed Ferret (*Mustela nigripes*) that school children had shot³, but this has not been confirmed. Guiguet later prepared two ferret specimens that were presented to the National Museum of Canada, leaving the whereabouts of the putative demonstration specimen unknown. Soon, armed with his own scientific collecting permit issued by the Federal Government — the youngest person to qualify at the time¹⁰ — and newly acquired skills, Guiguet began to prepare specimens accompanied with the locality and date of collection, and other pertinent information that confirmed, in some cases, records of historical importance and first occurrences of species in Saskatchewan and Canada.

A constant throughout the Shaunavon years was Holmes's recognition of Guiguet's potential as a museum biologist and collector. Holmes's support was important

because of his stature in the local community. Stuart Houston highlighted many of the contributions Holmes made to the development of Shaunavon through memberships in the Fish and Game League and Canadian Club, and as a founding member of the Grand Coteau Museum.⁷ Noted previously, Holmes had judged Guiguet's winning entry in a taxidermy contest but, in turn, Holmes was the beneficiary of Guiguet's collecting skills.

The collections

I wondered whether any of Guiguet's specimens became part of Charles Holmes's collection and if his hand in collecting and/or preparing them was indicated on the labels, or whether Holmes took credit for the specimens. Holmes's collection consisted of more than 600 specimens, mostly birds but also of several mammals. The Holmes family eventually presented about 500 specimens to the Alberta Provincial Museum, now Royal Alberta Museum (RAM), in Edmonton, in 1980⁷ (J. Hudon, email, 6 September 2019). Lesser numbers of specimens had been transferred to Saskatchewan Natural History Museum, now Royal Saskatchewan Museum (RSKM), in 1963 (D. Frier, email, 25 June 2019), Royal Ontario Museum (ROM), several of which were taken later by his son, Paul M. Holmes (B. Millen, email, 15 July 2019), and National Museum of Canada, now Canadian Museum of Nature (CMN; G. Rand, email, 7 September 2019). At least 15 study skins (8 birds and 7 mammals) Guiguet collected in the years before the family left Shaunavon also are catalogued in the CMN. Originally deposited in the Museum, these specimens were transferred by volunteer curator Herbert F. Hughes to the CMN in 1935 (G. Rand, email,

29 May 2019), where they still reside.

Holmes was named as collector of most specimens, including those taken at Shaunavon, but there were a few exceptions. In addition to the specimen of Calliope Hummingbird (*Selasphorus calliope*) noted below, Guiguet's name was given as collector of two species: adult female Bohemian Waxwing (*Bombycilla garrulous*; RAM Z80.120.178) taken on February 1932 and adult male Ruddy Duck (*Oxyura jamaicensis*; RAM Z80.120.315), 11 May 1935. In addition to Holmes's name as collector credit was given on two specimens of Gray-crowned Rosy Finches (*Leucosticte tephrocotis*; RSKM_BIRD_A-3367, A-3368) to Laurence B. Potter at Eastend, another rancher-naturalist of the Cypress Hills¹², and Townsend's Solitaire (*Myadestes townsendi*; RSKM A-2728) prepared by H. Hedley Mitchell, who compiled the first catalogue of Saskatchewan birds.¹³ If Guiguet had collected and/or prepared specimens that became part of Holmes's collection, he was given credit.

Among Guiguet's specimens registered in the CMN are two Black-footed Ferrets, the first (CMNMA 12682) salvaged near Shaunavon in 1934 (Figure 2), whereas the other specimen (CMNMA 14078) was taken near the former hamlet of Senate in the extreme southwestern corner of the province, in 1935, and submitted salted for preparation later as a study skin. They are among the few Black-footed Ferret specimens, and the last, catalogued in museums that provide permanent records of occurrence of this species at the northern edge of its historical range¹⁴⁻¹⁶, before the species largely disappeared from the Saskatchewan landscape.

A specimen of Black-footed Ferret (Figure 3), faded after years



FIGURE 2. Labels attached to specimen of Black-footed Ferret (*Mustela nigripes*; CMNMA 12682) taken at Shaunavon, Saskatchewan, 23 November 1934, and prepared by Charles Guiguet. Photo credit: G. Rand.

on exhibition in the Museum, was killed in a haystack near Val Marie, Saskatchewan, in 1965¹⁶, about 30 years after Guiguet left Shaunavon. The specimen disappeared about 20 years ago during renovations of the Museum's natural history room (K. Attrell, email, 22 May 2019). Upon realization of the rarity of this species, the mounted ferret may have been transferred to another museum for permanent storage, but there is no record of this, and contacts with several curators (see acknowledgements) did not turn up this specimen.

Black-footed Ferrets had been recorded as last observed in Canada in 1937 and were formally designated as extirpated in 1978¹⁷, but this record and several accepted observations revealed its presence through the mid-1980s, "well beyond the range of Black-tailed Prairie Dogs."¹⁶ The population declined rapidly in the early 1900s, caused in part by cultivation of habitat, programs to eradicate the Black-tailed Prairie Dog (*Cynomys*

ludovicianus), the ferret's principal prey, and diseases.^{17,18} Efforts to re-establish the Black-footed Ferret in Saskatchewan are underway.¹⁹ Guiguet's specimen of Black-tailed Prairie Dog (CMNMA 12681, 31 July 1934) taken at Shaunavon provided another permanent record of this species' occurrence within the radius of historical colonies recorded in Beck's *A Guide to Saskatchewan Mammals*.¹⁵

Other mustelids also were of interest. In late November 1932, a note appeared in the local newspaper stating that a dead weasel recently received by the Museum had been "forwarded to Ottawa & not satisfactorily identified." It lacked black on the tip of the tail, but because the skull was not submitted, its identity as a Least Weasel (*Mustela nivalis*) was not confirmed.²⁰ Guiguet's two specimens of Least Weasel (CMNMA 12679, 24 August 1935; CMNMA 12680, _ 1934) confirmed Shaunavon as another locality within the species' range in southwestern

Saskatchewan. Although those specimens were not recorded in Beck's Guide¹⁵, others of this species were listed from nearby Eastend (taken by J. Dewey Soper²¹) and at Skull Creek, taken by Steven A. Mann, another of the rancher-naturalists of the Cypress Hills whose legacy of observations and specimens endure.¹² Still in Holmes's collection and therefore not included in Beck's Guide, was a Least Weasel later presented to the Saskatchewan Natural History Museum (now Royal Saskatchewan Museum, RSKM_Mamm_2271) collected at Dollard around 1929. Holmes's specimen may have been among the mounts held in the Museum at the time, to which Guiguet referred in one of several pieces published in the local newspaper under the heading "Student News."²² In addition to this specimen, Holmes presented three preserved Long-tailed Weasels (*M. frenata*; CMNMA 11758-59, 12298), taken in 1933, to the CMN (G. Rand, email, 4 September 2019).

The scent glands of ferrets and



Figure 3. Mounted Black-footed Ferret (*Mustela nigripes*) killed near Val Marie, Saskatchewan, in 1965. Photograph courtesy of Grand Coteau Heritage & Cultural Centre, Shaunavon.

weasels presented special challenges to the young taxidermist, but the preparation of a specimen of the Striped Skunk (*Mephitis mephitis*) caused quite a stir in the local school, as revealed in the following tribute to the museum's curator.²³

The mammals department was aided by science teachers. Jack [Hughes] tried to stay out of trouble but one incident is worthy of note. The subject for mounting was a skunk, the student taxidermist was Charles Guiguet. Jack made sure that he knew the correct procedure for removal of the scent gland, and left, leaving Charles to finish and lock up. The next day was Saturday. On Monday the schools opened as usual, but immediately all the students of the junior building were sent home. Charles had removed



FIGURE 4. Silver-haired Bat (*Lasionycteris noctivagans*, CMNMA 12247) taken by H.L. Dixon at Govenlock, Saskatchewan, on 7 June 1933, was prepared by C.J. Guiguet. H.F. Hughes, curator of the Museum at the time, was named as collector. Photo credit: G. Rand.

the scent glands just fine. Then, ... he had left them neatly on the heat register of the Grade Eight classroom. The school was closed for two days. The museum survived [but apparently the mounted skunk did not]. Charles went on to become the head of the Mammal Department in Victoria, B.C.

Guiguet's bat specimens brought further accolades. His specimen of Hoary Bat (*Lasiurus cinereus*; CMNMA 12683) collected at Shaunavon on 1 September 1934 was apparently the first specimen of this species taken in Saskatchewan.²⁴ A Silver-haired Bat (*Lasionycteris noctivagans*; CMNMA 12247) was taken at Govenlock in the extreme SW corner of Saskatchewan by Dr. Hugh L. Dixon, rancher-veterinarian, on 7 June 1933 (Figure 4). Guiguet's preparation of this and other specimens elicited praise from Rudolph M. Anderson of the National Museum of Canada, who wrote to the local newspaper: "Please convey my compliments

to Charles Guiguet for the fine makes of skins he is turning out."²⁵ Reference was made to this Silver-haired Bat specimen in the first compilation of Saskatchewan bat records²⁴, whereas this specimen and another allegedly taken at the same locality and on the same date were tabulated in an update of this species' status in the Province²⁶, although only one specimen was catalogued in CMN (G. Rand, email, 4 September 2019).

Credit goes to Guiguet for helping to sort out the identities of hummingbirds that occurred in southwestern Saskatchewan. Identification of hummingbirds, particularly females and juveniles, was difficult without specimens. Laurence Potter, a friend of Holmes¹², noted that "Hummingbirds are seen not infrequently in flower gardens, but public opinion in general is opposed to shooting, so their identity, whether rufous, calliope, or ruby-throated, remains

undetermined.”²⁷ Sight records of Ruby-throated Hummingbirds (*Archilochus colubris*) were backed by one found dead at Eastend in August 1925.²⁸ Several Rufous Hummingbirds (*Selasphorus rufus*), another western species, were found dead, in late July and early August.²⁷⁻³¹ None of these specimens was located, although a badly decomposed bird was entered into the Museum’s catalogue, salvaged on 13 August 1932. Since then, with more than 30 records, Rufous Hummingbird is designated as a straggler in Saskatchewan³¹, whereas the Ruby-throated Hummingbird is common and regularly breeds in the Province.³²

The status of another western species of hummingbird in Saskatchewan — Calliope Hummingbird — remains as “accidental” on the basis of Guiguet’s specimen³³, a juvenile shot (not found dead³⁴) in a Shaunavon

garden on 22 August 1935 (Figure 5).^{28,35} Holmes forwarded the specimen to the National Museum of Canada where its identity was confirmed by ornithologist Percy A. Taverner.²⁸ Guiguet was eventually credited with collecting the specimen³⁵ (RAM Z80.120.396), which was among the bulk of Holmes’s collection transferred to the Royal Alberta Museum.⁷

A family group of Northern Flickers (*Colaptes auratus*), taken at Shaunavon on 23 June 1934 (CMNAV 25913-20), were “hybrids” of yellow-shafted and red-shafted colour phases, possibly collected in early recognition of the significance of the plumage. Guiguet’s specimens and others collected and noted by Godfrey²⁸ provided early evidence of contact between breeding Yellow-shafted Flickers and Red-shafted Flickers in southwestern Saskatchewan.³⁶

After Shaunavon

Charles Guiguet’s early life as a naturalist in Shaunavon was not unlike that of many other young naturalists. He received considerable encouragement and support along the way, first on the home front, and later from teachers in his school and the staff of the local museum. With his solid work ethic, he seized opportunities and honed his collecting skills through a succession of mentors, all of which placed him in good stead for a career as a field biologist and curator. Success eventually led to the curatorship of birds and mammals at the British Columbia Provincial Museum (BCPM; now Royal British Columbia Museum), but not before he gained additional experience assisting with other projects. Now in British Columbia, Guiguet was invited to join a field party organized by Hamilton Mack Laing to collect specimens for Anderson, now Chief, Division of Biology at the National Museum. Laing was embarking on a four-year faunal reconnaissance of several regions in British Columbia and was able to hire one assistant each year, starting in 1936.³⁷ Charles was hired on the strong recommendation of Anderson and, as it turned out, he stayed on as a member of the field party for the next four years (Figure 6). Anderson endorsed Guiguet’s collecting skills in a letter to Laing in 1936³⁸:

Mr. Charles G. [sic] Guiguet ... 20 years old, [has] passed senior matriculation at Shaunavon, Saskatchewan. He has collected for Shaunavon “Grand Coteau Museum” for several years, and makes good mammal and bird skins, and has sent me a number. He needs a job and some encouragement. H. F. Hughes [volunteer GCM curator] thinks he is a coming naturalist, if he gets half a chance. He wants to go to college if he gets enough money ahead to make a start. If



FIGURE 5. Calliope Hummingbird (*Selasphorus calliope*, RAM Z80.120.396) taken by Charles Guiguet at Shaunavon on 22 August 1935. Photo credit: J. Hudon.



FIGURE 6. About two years after leaving Shaunavon, Charles Guiguet is shown preparing a specimen of the North American Porcupine (*Erethizon dorsatum*), near Stuiie, British Columbia, 16 September 1938. Photo credit: Hamilton Mack Laing; image G-03674, courtesy of Royal British Columbia Museum and Archives.

you take Guiguet you will have one boy who is willing to work at anything, industrious and full of ambition, who will be able to help you turn out a good line of mammal and bird skins, and help at any kind of work around camp.

Word of Guiguet's collecting skills likely reached Laing through additional sources. Considering that Guiguet was a protégé of Holmes, and that Holmes had hosted James Munro at the family homestead, and that Munro knew both Anderson and Laing, the level of Guiguet's skills likely had become general knowledge. All of these men knew Ian McTaggart-Cowan, under whose guidance Guiguet soon was collecting specimens for the BCPM and the University of British Columbia (UBC), and under whose supervision Guiguet studied zoology following service in WW II. A long and mutually beneficial association ensued between Cowan, the mentor, and Guiguet, initially the student. Their association began

in the era of museum collectors and curators, but it transitioned to the documentation of wildlife distribution and abundance. Many activities conducted by the two men have been highlighted in recent tributes to Cowan.^{39,40}

Guiguet was hired by the BCPM in 1948. During his long career he undertook field inventories that took him to some of the most remote and difficult-to-reach regions of British Columbia, including many sites along the Pacific coast where he contributed new information on the biology of coastal fauna, especially seabirds^{41,42} and insular distribution of mammals.⁴³⁻⁴⁵

Giving back

Guiguet gave back to his community. He was an active participant in school activities, including sports, and his popularity led to his election as leader of the cheer-leading team.⁴⁶ He penned numerous contributions for the

local newspaper, some under the heading of "Student News", and he sent updates of his activities back to his home town after moving to the west coast (Figure 7). Particularly impressive was Charles's encouragement of other boys to participate in taxidermy sessions in the museum and in the establishment of a museum in the school from which all students benefited, and apparently the teachers, too. Correspondence between the school's principal and Chief Game Guardian in Regina, archived in the Grand Coteau Heritage & Cultural Centre, however, revealed concern that one museum in Shaunavon was enough.⁴⁷ With assurance that specimens would not be duplicated, and strongly supported by the principal and teachers, a compromise was reached and specimens for display were distributed between the school and local museum. Feral pigeons were used for the taxidermy lessons. The community showed its appreciation by honouring Charles and his brother Marcel, "when a capacity crowd of young people filled the Legion Hall at a farewell dance", before the family left for British Columbia.⁴⁸

Epilogue

I knew Charles Guiguet, initially through correspondence while preparing to conduct field research on seabirds in British Columbia in the early 1970s. A few years later, while on sabbatical leave at the British Columbia Provincial Museum, I was able to discuss with Guiguet projects planned for Barkley Sound on the west coast of Vancouver Island. I tapped his vast experience gained while he worked at many localities along the coast, including my first study site, Langara Island on Haida Gwaii. Charles always responded in great detail to my inquiries, with an

Charles Guiguet, formerly of Shaunavon, and now of Vancouver, B.C., has joined a survey group for the National Museum for the summer. This is good news to Charles' many friends in Shaunavon, who will wish him success in a work for which he is well fitted. He was the enthusiastic member of many collecting parties for the local Grand Coteau Museum, and specimens of his work at the museum would indicate that Charles has a gift for this work, and his position as collector and cook with the national museum party will be a novel experience and a help in furthering what Charles hopes to make his life's employment.

FIGURE 7. Charles Guiguet updated his friends in Shaunavon, stating he had joined a field party of the National Museum of Canada led by Hamilton Mack Laing. *The Shaunavon Standard*, 25 June 1936.

eye to enhancing the success of our endeavors. More recently, Charlie's field notes have provided important observations in support of work underway on a volume focused on ornithological exploration and research on and near Langara Island. Guiguet was awarded a Lifetime Achievement Award by the Pacific Seabird Group in 1995. He died in Victoria on 27 March 1999, but his accomplishments live on.

Acknowledgements

I am especially indebted to Kelly Attrell for her interest and considerable effort in providing information archived in the Grand Coteau Heritage & Cultural Centre in Shaunavon, Saskatchewan, and for hosting a visit to examine specimens and other material under

her care. Kathleen East, of the same institution, scanned several archived newspaper articles. Kelly-Ann Turkington provided a photograph and Sheila Norton located the Anderson letter archived in the Royal British Columbia Museum and Archives, respectively. I am indebted to curators of the Beaty Biodiversity Museum, University of British Columbia, Vancouver (Ildiko Szabo); Canadian Museum of Nature, Ottawa (Gregory Rand); Royal Alberta Museum, Edmonton (Jocelyn Hudon); Royal British Columbia Museum, Victoria (Lesley Kennes); Royal Ontario Museum, Toronto (Burton Lim, Brad Millen, Mark Peck); and Royal Saskatchewan Museum, Regina (Danae Frier, Ray Poulin, Cory Sheffield). N.L. Sealy assisted in many ways throughout this project. Mark

Guiguet put his family's stamp of approval on the final version of the manuscript.

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RECENT OBSERVATIONS OF THE MOTTLED DUSKYWING IN SANDILANDS PROVINCIAL FOREST, MANITOBA

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Mottled Duskywing (*Erynnis martialis*) is a distinctively patterned, early-season spread-wing skipper that, depending on the jurisdiction, is considered locally uncommon, declining, rare or extirpated throughout its North American range. In 2012, The Committee on the Status of Endangered Wildlife in Canada designated the Great Lakes and Boreal populations of Mottled Duskywing as Endangered (Conservation Ranking S2).¹ Following a reassessment of the provincial status of Lepidoptera in 2015, the Manitoba Conservation Data Centre changed the conservation ranking from S2 to S1 (based on the species' limited

distribution and small number of occurrences).²

In Manitoba, Narrow-leaved New Jersey Tea (*Ceanothus herbaceus*), is their sole larval foodplant (Figure 1). Alternate common names include Prairie Redroot and Inland New Jersey Tea. *C. herbaceus* is a perennial woody shrub in the Buckthorn family (Rhamnaceae) that grows up to three feet tall, has finely serrated leaves and bears clusters of whitish flowers. The plant is found in semi-open to open areas in dry, sandy locations. The greatest known concentrations of *C. herbaceus* are found in Sandilands Provincial Forest, in the southeastern corner of the province.

A relatively large population of *C. herbaceus* (exceeding 500 plants) grows along an 11 km section of Provincial Road 503 in Sandilands Provincial Forest, south of East

Braintree. Plants were distributed in loose clusters or dense groups, these often connected by a varying number of scattered individual plants. The right-of-way along this stretch of road is wide and plants were located from the road's edge to the forest margin.

Encouraged by the abundance of the foodplant, Garry Budyk and I informally surveyed the area for the skipper on June 24, 2019. Reaching a maximum temperature of 24°C, the day was mainly overcast with a light wind. Between 11:00h and 15:30h, we made 10 stops along the road, each at least 0.25 km apart. Duration of stops varied from 20 to 45 minutes. Identifications of skippers and butterflies present were made as they basked on the ground or on the tips of twigs, or as they nectared. Stepping carefully between the host plants encouraged



FIGURE 1. Narrow-leaved New Jersey Tea, larval food plant of Mottled Duskywing. Photo credit: Deanna Dodgson.

less active individuals to flush, allowing better views. Northern Cloudywing and several butterfly species (Canadian Tiger Swallowtail, Silver-bordered Fritillary, Northern Crescent, Viceroy, Painted Lady, White Admiral and Monarch) were recorded in addition to Mottled Duskywing.

All but one stop produced two or more Mottled Duskywings. Totals per stop were based on the highest number of individuals seen simultaneously (Table 1). By day's end, we had counted 21 Mottled Duskywings (17 males and four females) (Figures 2,3). Unidentified duskywings were seen at several locations so the total number may have been higher. Photographs of at least one Mottled Duskywing were taken at most stops, and all data were submitted to the Manitoba Conservation Data Centre's "All Manitoba Nature" project on iNaturalist.³

Behaviours of Mottled Duskywings were much the same as described in the literature, with males being quite active, flying to and fro as they presumably searched for females among the clumps of *C. herbaceous*, or interacting with other skippers and butterflies passing by. The females were generally more sedentary, remaining near the host plants. Both sexes were observed nectaring on the foodplants, and one female was seen in the act of ovipositing. Damp patches of soil at which to observe

TABLE 1. Summary of Survey Results

STOP NUMBER	COORDINATES (NAD83)	NUMBER OF MD
1	49.55682 N/-95.74183 W	2
2		2
3		2
4		2
5		3
6		3
7		2
8		1
9		2
10	49.58361 N/-95.86553 W	2



FIGURE 2. Mottled Duskywing male, basking. Photo credit: Deanna Dodgson.



FIGURE 3. Worn female Mottled Duskywing. Photo credit: Deanna Dodgson.

puddling lepidopterans were entirely lacking.

In the 10 seasons in which we have observed Mottled Duskywings in Sandilands Provincial Forest, this marks the first time that we have detected more than five individuals in one small area in a single day.

Acknowledgements

Thanks to Peter Taylor, Larry de March and John Acorn for helpful comments and suggestions on drafts of the article.

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HUMAN NATURE

Shirley Bartz and Andrew Miller

Regina, SK

When we moved our family to Regina in 2013, we began getting to know the Saskatchewan prairies. Since then, we have built memories at Buffalo Pound, Last Mountain Lake, Echo Valley Provincial Park, the East and West Blocks of Grasslands National Park and the Cypress Hills. Last year, we had a unique opportunity to visit a huge area of native prairie in southwestern Saskatchewan. As part of Andy's work at First Nations University, we were invited by the Nature Conservancy of Canada (NCC) to join a meeting with First Nations of this region at Old Man on His Back.

Old Man on His Back Prairie and Heritage Conservation Area (OMB) was gifted to NCC in 1995 and encompasses 5,297 hectares of native prairie grasslands in the southwestern corner of the province. To maintain the ecological relationship of grazing on these grasslands, the NCC has managed OMB as a working ranch, leasing some areas for sustainable cattle grazing. Recently, NCC also implemented a controlled burning and prairie restoration program, and conducts research to evaluate the success of these management strategies.

In 2003, the NCC released a herd of Plains Bison onto OMB and, as the herd grew, NCC began developing a management plan for the bison. In May 2019, they invited Indigenous communities to meet at OMB for a weekend to talk about integrating traditional knowledge and ceremonies into this plan, and to discuss how a bison reintroduction

program at OMB might contribute to First Nations community objectives to reawaken their ties to bison.

We left Regina after work on Friday and drove southwest, with the setting sun lighting the edges of a blanket of cloud stretching all the way to the Alberta border. By the time we reached Claydon on Highway 18, the sky was black and we made our way west down a gravel road into a darkness without farm lights or stars.

Soon we came to a Texas gate with a notice announcing that we had officially entered OMB, and a sign advising "Bison At Large". The bison looming out of the darkness a few meters inside the gate was large enough to dwarf our car. We came to a stop, rolled down the windows and listened to this huge animal breathe. After a quiet "Hello Bison" from us, he blinked and shifted over a few steps, making room for us to pass into his land.

The fossil record shows bison appearing in North America close to 200,000 years ago, with human arrival in this region slipping in about 13,000 years ago. Before European settlement, an estimated 30-60 million bison lived in North America, moving seasonally, from the eastern seaboard to the eastern foothills of the Rocky Mountains, north to the Yukon and as far south as Durango, Mexico.

Just 200 years ago, bison and the Blackfoot, Cree, Ojibway, Assiniboine, Nakota and Dakota people shared this land, moving according to the seasons, floods, fire, drought and each other's presence. *linii*, *tatanka*, *pté*, *paskwâwimostos* - these were the names which the Blackfoot, Dakota, Assiniboine, and Plains Cree

people used to refer to the bison - an animal central to community life and identity until its near extinction in the late 19th century.

As our family drove past the lone bull at the gate to OMB, we felt that we had been welcomed by an old soul who could unlock important ecological functions and restore and heal cultural relationships. In seven more kilometres, we reached the OMB Interpretive Centre, pitched our tent and fell asleep.


When we woke in our tent Saturday morning, we could hear people arriving, exchanging greetings and the excited voices and footsteps of children. The gathering had begun. Approximately 30 Indigenous community members, representing over a dozen First Nations were arriving from SK, MB and AB.

Over the course of the weekend, Elders spoke about their peoples' history on the land, their relationship with bison and the oral traditions and ceremonies that celebrated these relationships. Some shared their experiences and insights as current managers of their own bison herds. There were suggestions for how the herd could be kept healthy, and requests by communities for access to OMB and the bison in order to renew their relationship, collect medicines and hold ceremonies. There were difficult discussions and also laughter. Later, as we walked together through the grasslands, within sight of the bison herd, there was great joy.

Our group moved over the grasslands at different speeds, some identifying medicinal plants, others searching for the NCC's prescribed burn plots and talking about the grasses and forbs beginning to grow

there. We made our way to an ancient bison rubbing rock; a huge chest-high stone with a grooved track around its base and tufts of wooly bison undercoat caught in its rough surface. Prayers were made and prairie sage was burned as churning towers of clouds passed overhead.

Walking back to the road, there were quiet conversations as people wandered in shifting groups. Our 11-year-old son ran across the slopes with the other kids, searching for bones and shouting out their discoveries of clumps of downy bison hair, a new flower, a burrow, a feather. The discussions and

negotiations taking place at OMB were important; despite a rough history, we were moving toward clearer understanding and making plans for a path forward. With grass seeds in our socks, wind in our ears and the eyes of the bison marking our passage, healing was underway. 



Management meeting attendees at bison rubbing rock at Old Man on His Back, May 2019. Photo credit: Andrew Miller.



Photo credit: Fran Kerbs.



Photo credit: Annie McLeod.

Mystery Photo Spring 2020 (above)

QUESTION: Can you identify the species of this rare feathered visitor to Saskatchewan?

Please send your answers to: Blue Jay editor Annie McLeod at bluejay@naaturesask.ca or by letter mail: 3017 Hill Ave. Regina, SK S4S 0W2.

Those with correct answers will be entered into a draw for a prize from Nature Saskatchewan.

Mystery Photo Winter 2019 (above)

ANSWER:

The species pictured here is likely the Broad-winged Bush Katydid (*Scudderia pistillata*), which is found throughout the southern half of Saskatchewan. Definite identification of the Broad-winged Bush Katydid, however, as opposed to other katydids that occur close to the Saskatchewan border, relies mainly in the form of the male genitalia (Vickery & Kevan 1985). As such, observers would need to see the tip of the abdomen of male specimens in order to verify the species. Thank you very much to David Larson for providing this information.

Vickery, V.R. and D.K. McE. Kevan. 1985. The insects and arachnids of Canada, Part 14. The grasshoppers, crickets, and related insects of Canada and adjacent regions. Agriculture Canada, Research Branch, Publication 1777. 918 pp.

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. 🐦



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