The Red Deer River Naturalist

October 2024 Editors: Myrna Pearman & Susan van der Hoek

Habitat Selection by Sandhill Cranes in Alberta with Wyatt Villetard

24, October 2024
7:00 PM,
Kerry Wood Nature Centre
Red Deer

Wyatt Villetard is a Master's student in Dr. Mark Boyce's Lab at the University of Alberta. His thesis focuses on habitat selection of migratory and nesting Sandhill Cranes in northern Alberta. He is endeavouring to determine—with the use of passive acoustic devices—high quality crane nesting habitat as well as the effects of weather on crane migration.

Crane photos by Myrna Pearman

SPONSORED BY RDRN RED DEER RIVER NATURALISTS

All are Welcome

Bird Focus Group with Chris Olsen
October and November Schedule

Photo by Claudia Lipski

October 5 – Nova Nature Trails – meet in the parking lot
October 12 – Maskepetoon Park – playground parking lot (Kerry Wood Drive/Oak Drive)
October 19 – Crimson Lake (Amerada Trail) – meet at the parking lot*
October 26 – Riverbend Upper trails – meet in the main parking lot

November 2 – Dickson Point/Trout Pond (south of Dickson for 4.1 km on Range Rd 31)
November 9 – Riverbend Upper trails – meet in the main parking lot
November 16 – Barrett Park to Gaetz Park – meet at Rotary Picnic Park, main parking lot
November 23 – Bower Woods – meet on the street across from 37 Selkirk Blvd
November 30 – McKenzie Trails – meet in the main parking lot

Trips start at 10:00 AM and local trips usually finish around 1:00 PM. Use the *Alberta Discover Guide,* the Birding Trails Alberta website or your favorite mapping app. Some trails are on rough terrain so wear sturdy hiking footwear, a hat and layers, and bring poles if you use them. Carry water, lunch/an energy snack, bear spray and insect repellent. Advise the leader of any potential medical issues. Call Chris (780-581-4430) if you have questions. * This walk will be 10 km/four hours.

Did You Know:
by Susan van der Hoek

A group of bats is called a **cauldron**. Bat groups are also called a **colony** when in a large cave or a **cloud** when a large group is in flight. Bats are flying mammals of the night, not much bigger than a house mouse. They are the only mammal that flies. Bats can live up to 40 years. The wingspan of the two most common Canadian species (Little Brown Myotis and Big Brown Bat) ranges from 20 to 35 cm (8 to 14 in.), though some can be larger.

Alberta has nine species of bats, with over half of them endangered. There are two major groups of bats in Alberta based on how they cope with our long, cold Canadian winters. These include three species that are long-distance migrants and six species that hibernate in the province and are present year-round. The three species that migrate are **Hoary Bat** (*Lasiurus cinereus)*, **Eastern Red Bat** (*Lasiurus borealis)* and **Silver-haired Bat** (*Lasionycteris noctivagans).* The six year-round resident bats are **Big Brown Bat** (*Eptesicus fuscus),* **Little Brown Myotis** (Little Brown Bat) (*Myotis lucifugus*), **Long-legged Myotis** *Myotis volans*), **Northern Myotis** (*Myotis septentrionalis*), **Long-eared Myotis** (*Myotis evotis*) and the **Western Small-footed Myotis** (*Myotis ciliolabrum*).

Bats need a safe, warm place to rest and raise their pups (young). Mother bats often live together in maternity colonies while males typically roost alone during the summer. Bats are the main predators of flying nocturnal insects. A single little brown bat is capable of eating the equivalent of its weight in insects, about 600 per hour, in just one night. They can capture flying as well as resting insects, and usually hunt above bodies of water, on treetops and near light sources that attract insects.

Bats may bare their teeth and squeak loudly, leading many people to believe they are vicious. In reality, it is only trying to ward off a possible attack from one of their predators (which include hawks, falcons, owls, magpies, cats, snakes and humans). Because bats can carry rabies, it's important to never touch a bat with bare hands.

In The Alberta Wilderness with Don Auten

This month's species is an animal that doesn't get much attention, the porcupine! The second largest rodent in Alberta (beavers are the largest), porcupines live quiet, discreet lives and usually go unnoticed by people. They are solitary for most of the year, with the exception of a few weeks during mating season in the fall.

Only occasionally do I get to see porcupine, slowly waddling along or sometimes sitting quietly up in a tree. I have captured a few trail camera photos of them over the year. The images are of them at night, confirming that they are mainly nocturnal. Because they are slow moving, they have to have a defense system, and we all know that they have quills. Any predator that has an interest in a porcupine faces the challenge of how to get around their 30,000 erect quills!

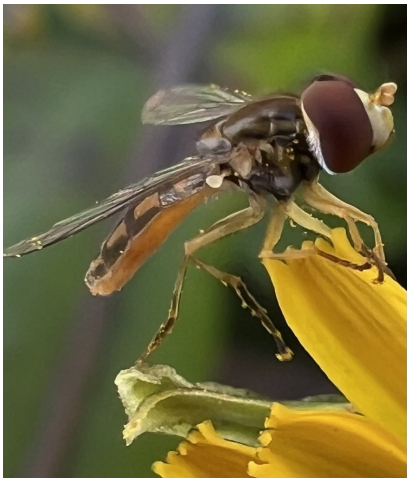
Seasonal Sights and Sounds of Alberta: The Important Ecological Roles of Hoverflies

By Dr. Sally Stuart

Late summer and early fall are wonderful times to observe family Syrphidae, the hoverflies. They are often tiny and easily overlooked, and little is known about hoverfly diversity in Alberta. According to iNaturalist, 113 species have been recorded in Alberta, of which16 were found in the Red Deer area.

There is something enchanting about watching their somewhat erratic behaviour. Nimble, often delicate in appearance they hover beside a flower, inspecting its suitability or defending their territory. Territoriality is common in males who will defend flower plots, sometimes to their death.

Their modified sucking mouth parts are excellent forsipping nectar. Diversity of mouth parts mean some species such as the drone fly *Eristalis tenax* have a longer proboscis (up to 10 mm) and hence can visit flowers with deeper floral tubes to access the nectaries. Others have shorter tongues.



Hoverflies are Dipteran flies, with a single pair of wings. Look carefully and you can often see the much reduced second pair that form the sensory structures called halters. Halters are visible in the photograph shown here [Marginated Calligrapher Hover Fly (*Toxomerus marginatus)*] as tiny cream-colored, club-shaped protuberances with a stalk and a knob. Especially important for balance, they contain hundreds of specialized sensory receptors (mechanoreceptors) at their base. When flying, environmental forces cause deformation of the exoskeleton which in turn stretches the mechanoreceptors. Information is then sent to neurons which control the wings and movement.

Flies are often divided into two groups based partially on antenna structure. Hoverflies or flower flies are members of the Brachycera group with short antenna containing few segments (see accompanying photograph). The Syrphidae family to which they belong is usually considered to have three subfamilies, two of the which are the Syrphinae and Eristalinae. Along with other flies, these species play an incredibly important ecological role as pollinators. A recent study by Toby Doyle et al. (2020) estimated that hoverflies visit 72% of global food crops. In 2017, they calculated they had a gross economic value of about 300 billion USD per year. Besides transferring pollen, they may also consume it, perhaps crushing it before swallowing.

For hoverflies, pollen which is rich in protein is important for ovarian and egg development. However, the tough outer protective layer cannot be broken down by their digestive juices. Furthermore, studies indicate that the pollen is not mechanically digested. Instead, it appears that the high sugar content of the nectar they consume starts the process of pollen grain germination. By the time the grains reach the midgut, a germinal pore (aperture) allows the contents to be expelled. Not only are adult hoverflies important pollinators but in many species their gluttonous larva play a huge role as predators by consuming pests such as aphids.

As can be seen by their large heads, dominated by massive compound eyes, vision is extremely important. Like many insects, their eyes are made up of vast numbers of photoreceptor cells clustered in groups called ommatidia. If you ever attempt to photograph them, you will immediately appreciate that such eyes are excellent at detecting movement over a wide range.

In most species, males are easily differentiated from females by their larger, holoptic eyes which meet on the dorsal surface of the head. Furthermore, male eye structure provides them with enhanced contrast sensitivity, speculated to be important when seeking females. In the accompanying photograph taken on September 24, 2023, the female was busy gathering pollen when the male hovered, pounced then grasped her thorax firmly in his first pair of legs.

Hover flies frequently mimic bees and wasps. The drone fly, resembling a bee drone, is a classic example. This behaviour is known as batesian mimicry. Although warningly colored, they lack any protective mechanisms: they are unable to sting and they do not even possess distasteful chemicals.

Listen carefully to hear the noise produced by a hoverfly as larger species emit distinct buzzing sounds. Researchers have wondered does this mimicry extend to their vocalizations? The few studies in this regard are far from conclusive, but it seems unlikely.

With the arrival of cooler fall weather, hoverflies have a choice, either remain over winter or migrate. The latter phenomenon, although observed in North America, has been much more extensively studied in Europe where during the months of August to October hoverflies move south. As this migration occurs at high altitudes, it is rarely observed. Migration results in hoverflies travelling huge distances of thousands of kilometres, often transporting with them copious quantities of pollen. Their migration leads to another important ecological role—the transportation of genes between widely separated plant populations.

The last species I observed in 2023, *Eristalis tenax,* was collecting nectar from the dandelions on October 15. Since recent evidence suggest bees are being particularly adversely affected by warming temperatures, the role of hoverflies as pollinators is becoming even more important in this Anthropocene epoch.

In Britain, there is a fascination with observing hoverflies, to the extent that it has now become extremely popular, almost like bird watching. Try it when 2025 rolls around!

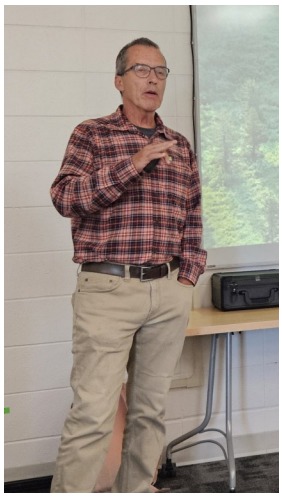
From Our President Rick Tallas:

Dale Leckie's presentation on Wildlife, Landscapes and Geology was excellent and enjoyed by all who attended our September 26 meeting. Our thanks to Sally Stuart for organizing speakers for the upcoming season.

RDRN continues to comment on issues on protecting nature and wildlife. Our most recent efforts have been to contest the "problem" grizzly bear hunt in Alberta. We continue to attract new members but we do **need more board members**. Please contact us if you are interested! Thank you for your continued support and LET YOUR VOICE BE HEARD!

RDRN joined forces with the Council of Canadians and Red Deer Polytechnic to host a recent **Water for 2050 Symposium**. A series of important lectures by high profile speakers was given at RDP and by Zoom, and a Water Ceremony was held at Ft. Normandeau in conjunction with Red Deer's Urban Aboriginal Voices Society. Our thanks to the organizers for bringing in speakers who offered information, insight and sobering predictions about our precious water resources. All lectures are on YouTube (**Water for 2050 Symposium**).

From top left: Kevin van Tighem, Cheryl Bradley, Jojo Gopher and assistant



MURAL: Judy Carleton of the Blackfalds and Area Historical Society collected a cache of correspondence and photos from the Founders of the Northwest Entomological Society in 1898, Arthur Douglas and Percy Gregson, along with many other records. Judy and the Blackfalds Historical Society raised $50,000.00— RDRN contributed $2,000.00—to build a mural project at the new Iron Ridge Secondary Campus in Blackfalds. A QR code can be scanned to explore the natural history along with Indigenous and Metis history of the Blackfalds area. You are encouraged to check out this stunning mural.

From Left: Artists Dawn Detarando, Dawn Saunders Dahl, Maskwacis Elders Jo-Ann and Jerry Saddleback, Artist Brian McArthur and Judy Carleton of the Blackfalds and Area Historical Society. *Photo by Rod Trentham*

Thank you Don!

Don Wales has retired from leading Flower Focus sessions. An amazing champion for nature, Don has led Flower Focus since 2012. His sessions were always informative and interesting, always with some humor thrown in. Don is passing the gavel and we are looking for someone to take his place. Please contact us if you are interested. Thank you, Don, for caring about wildlife, nature and the community.

RDRN Social Media:
2617 Facebook Members
317 X Followers
496 Instagram Followers

The Red Deer River Naturalists, the first natural history organization to be established in Alberta, traces its roots to the Northwest Entomological Society, founded in 1898. The objectives of the society are to foster an increased knowledge, understanding and appreciation of natural history, and to support conservation measures dealing with our environment, wildlife and natural resources.

Annual membership is $15.00 for individuals and $20.00 for families.

Regular meetings are held at 7:00 PM on the fourth Thursday of most months at Kerry Wood Nature Centre. Non-members are welcome.

Members are encouraged to contribute to this newsletter. The deadline is the last Friday of the month.

Box 785 Red Deer, AB T4N 5H2 Phone/Fax: 403.347.8200

rdrn.nature@gmail.com
www.rdrn.ca
wearenaturalwise.blogspot.com
Facebook
Twitter #RDriverNats
Instagram @RDriverNats

Our thanks to McElhanney for generously donating the printing of this newsletter and NOVA Chemicals for covering postage costs.

NOVA Chemicals® McElhanney

Cover Poster by Doug Pedersen

Photos, unless otherwise noted, by Myrna Pearman