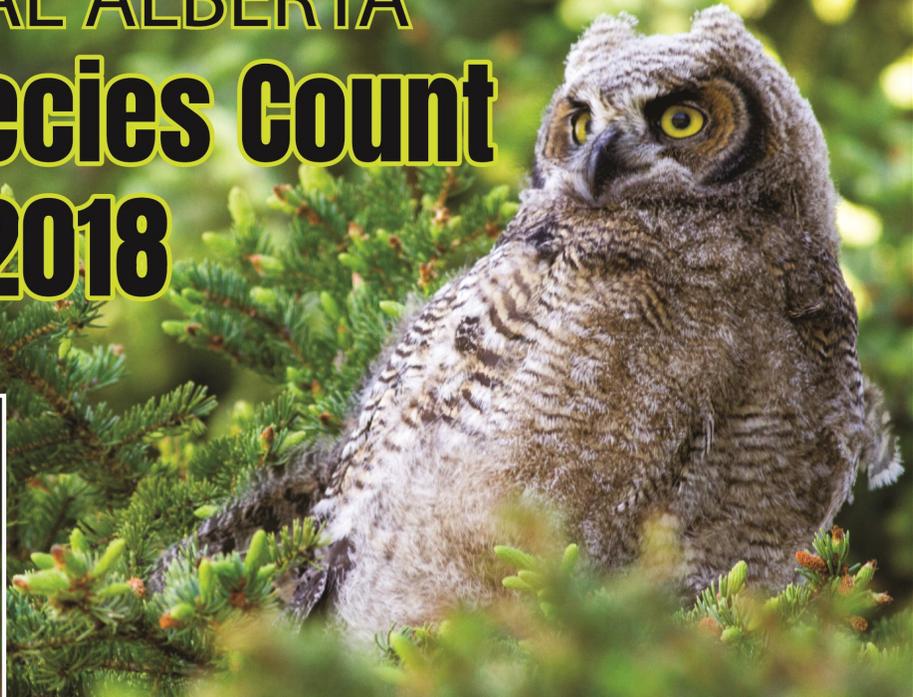


CENTRAL ALBERTA May Species Count 2018



Saturday May 26 and Sunday May 27

Count all species (birds, flowers, mammals, insects and amphibians). Potluck supper at Kerry Wood Nature Centre 6:00 pm Sunday, May 27.



Photos by Myrna Pearman & Doug Pedersen

Registration is required to participate in the count.
Please call Judy Boyd at 403-358-1098 for more information.

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Red Deer River Naturalists



www.rdrn.ca

SEASONAL SIGHTS AND SOUNDS OF ALBERTA:

BEAKS—ONE DEFINING BIRD CHARACTERISTIC/A MULTITUDE OF FUNCTIONS

Dr. Sally Stuart

It was spring several years ago when a particularly rapid snow melt left the water around the edge of our land higher than usual. While wandering around one evening, we were delighted to observe a noisy group of yellowlegs, probing the ground and enjoying the tasty morsels located beneath the substrate.

How were these birds able to so easily detect what was hidden from view? With their beaks, of course. Most people are familiar with Darwin's famous work involving the Galapagos finches whose beak shapes and sizes evolved to allow feeding on different diets. But beaks are much more than mere feeding devices. They have many functions: the colour can be used to attract mates; they help regulate temperature and determine migration routes; they are used for preening; they contain numerous sensory structures and they are an integral component of the respiratory tract.

Beaks, which are modified jaw bones, are similar in all birds. Beak bones are not solid but rather contain bars of bone called trabeculae. The trabeculae enable the bill to be both strong and light. The juncture where the upper beak joins the skull is able to flex and bend (cranial kinesis).

Nostrils are found at the base of the bill, leading into the beak chamber which contains delicate folds of bone (nasal conchae) which clean and warm the air before it enters the lungs. A special tissue lining (pseudostratified epithelium) has an abundance of mucous glands, perfect for catching microbes or particulate matter.

The layer surrounding the bone gives different beaks their unique properties. This hard, horny sheath, (rhamphotheca) is skin with an outer layer of specialised epithelial cells. Keratin, a hard protein molecule, gives the beak its hard consistency. The rhamphotheca is generally thicker in species that experience excessive wear and tear on the beak (e.g. woodpeckers). This outer layer of skin has the ability to constantly regenerate, unlike the central core of bone or the underlying dermal layer.

The dermis below the epidermis contains a plethora of blood vessels; the large surface area means a great deal of heat can be lost from the beak. Regulation of body temperature appears to have placed constraints on bill size; birds living at high altitudes or in colder climates have evolved shorter bills. Toucans, which live in the tropics have extremely large beaks relative to their body size. The beaks prevent overheating as the blood vessels dilate to give off heat and constrict to preserve heat during colder temperatures.

Beaks contain sensory receptors in the dermis of the bill, palate and tongue, some of which act as mechanoreceptors which respond to pressure, vibrations and stretch. Wading birds, having an abundance of sensory receptors in their beak tips (Herbst corpuscles, which are exquisitely sensitive to vibrations and pressure differences in the substrate), are tactile foragers. These receptors look like a cut onion, with many layers of fibres separated by fluid. This fluid activates the receptors when pressure is applied. Species with a large number of receptors have a correspondingly large brain area devoted to processing this information.

Dabbling ducks, geese and other aquatic species have bony pits near the tip of the bill (bill tip organs) which contain large numbers of Herbst corpuscles as well as receptors which are sensitive to light touch (Grandry receptors). Interestingly, the density of the Grandry receptors in the tip organ matches similar receptors found in primate fingers. Other sensory cells found in the dermal layer of the upper beak contain iron, a mineral that plays a role in detecting magnetic fields, so is used during orientation and migration.

Structural arrangements of protein fibres and pigment-producing cells impart colour to the bill. The male ruddy duck develops that brilliant blue beak in breeding season while other species have black beaks due to strength-giving melanin. Beak colour is often important in young birds. One study looked at owlets of the little owl (*Athene noctua*). When brood size is large, parents preferentially feed chicks with yellower beaks, appearing to assess this as an indicator of health status. Brighter beaks indicate a better chance of long term survival.

Natural selection has endowed the beak with a myriad of functions. Among some species of hummingbirds, males use their bills as a weapon to stab at each other during flight! Crows will use their beaks to manipulate sticks as tools.



Leo de Groot of Sylvan Lake put out a suet feeder in his yard and was delighted when a male and female Pileated Woodpecker each took a position on opposite sides of a nearby tree.

HOW TO CONDUCT A MAY SPECIES COUNT

The May Species Count is a census of all living organisms. Individual animal numbers (example: 6 mule deer) are to be tallied during the course of the count. If you see a rare bird (something that shouldn't be in this area), please note as much relevant information as possible – what the bird was doing, when it was doing it, how good a look did you get at it, did you get a photograph? When counting flowers in bloom, only the name of the species is needed. You don't need to count how many blooms you see. If you see a rarity, a photograph will also be required. Also, please note any odd situations; for example, profuse numbers of a species one year but rare the next.

Please count between 9 a.m. to 5 p.m. on either Saturday May 26 or Sunday May 27. Please use separate tally sheets if you are counting in different locations or on different days. For example, if you are counting in both Zone A and Zone

B, you need to submit one tally sheet for Zone A and one for Zone B. If you are only counting in Zone A but are doing it both days, submit a tally sheet for Saturday and one for Sunday. And make sure that on Sunday you count in a different part of Zone A than you did on Saturday. Please ensure that you fill in ALL blanks in the information section of the bird tally sheet. May Species count information will be submitted to Nature Alberta and Bird Studies Canada, so please be sure that all count information is complete.

It's important that we know that you are participating in the count so no overlap of counting occurs. Please contact Judy Boyd at [403-358-1098](tel:403-358-1098) before May 24 if you will be counting or if you need a flower tally sheet. Your bird tally sheet is included with this newsletter. Please mail your tally sheet to the RDRN office: Box 785, Red Deer, Alberta, T4N 5H2 before June 15 or drop it off at the Nature Centre, attention: Judy.

There will be a potluck supper for participants starting at 6 p.m. on May 27. Bring food to share, your own plate, cutlery and drinks.

RESPONSE TO THE LOCATING OF PICKLEBALL COURTS AND PARKING AT THE PROPOSED RIVERSIDE DRIVE SITE: DON WALES

The Red Deer River Naturalists vigorously oppose the proposed Riverside location of Pickleball Courts and parking. The location in question is a triangle of land on the west side of Riverside Drive. It consists of rapidly regenerating native vegetation and at the south end, a relatively recent planting presumably by the Junior Forest Wardens. It also contains a bike stunt park presumably operated and maintained by the Pines Dirt Bike Club. The site is currently secured from vehicle entry with animal movement friendly post and cable fencing. The RDRN opposes this site for the following reasons:

Destruction of plantings at the south end of the site goes against the community involvement recommendations in the, soon to be completed, Urban Forestry Management Plan. These reforestation projects at some expense and considerable sweat equity, involve clubs, citizens and regularly staff from the Parks Department. This is a slap in the face of their efforts. The City has a unenviable track record of destroying or paving over community plantings (67th Street east construction, Barrett Park, etc.)

The northern end consists of rapidly regenerating native vegetation consisting of maturing white spruce that have either been planted or are naturally regenerating from the Pines escarpment. Again, the reduction of canopy cover is counter to the recommendation in the Urban forest Management Plan. Areas like this help to improve air quality which is important in that it is across the road from the air quality monitoring station that has consistently recorded poor valley bottom air quality. The ground cover in this area that currently absorbs rain and snow melt will be paved over with the court surfaces and presumably paved parking area thus interfering with natural drainage and absorption. (Picture below)

The City has done a good job of identifying the significant wildlife corridors within the river valley and creek systems. However, they have not adequately protected these essential connections from development. With the planned and partially developed industrial park to the north of this site, this is the last remaining land parcel to connect wildlife habitat on the Pines escarpment with the Red Deer River. Upstream is a severe constriction of this corridor with the 67 St. bridge the locating of the Cultural Housing Project and Native Friendship Center and the chain link fencing of the Lion's Campground. This is yet another constriction with the expected chain link fencing that will likely be required to secure the Pickleball site. These areas provide temporary cover for animals waiting to negotiate the bottlenecks both up river (mentioned above) and downriver past the industry complex, the Civic yards, and the very wildlife unfriendly Three Mile Bend Off Leash Dog Park.



BIRD FOCUS: KEITH KLINE

May 5: Lockerby Natural Area - We will car pool to the site as there is limited parking available. Meet at 10 a.m. at KWNC Call Keith if you plan to attend.

May 12: Open - Nothing scheduled yet.

May 19: Maskepetoon - Meet in the parking lot and exercise area on the west side of Kerry Wood Dr (Near Overand Pl).

May 26 and 27: May Species Count. Count all species (birds, flowers, mammals, insects). Call Judy to register (registration required) or for more information.

June 2: Hazlett Lake - Hwy 11A west. Two hundred meters before the exit to QE11, on the right side of the road, is an entrance to the property (I will be standing there).

June 9: O'Brien Wetland - Meet at the Safety City parking lot.

June 16: Ellis Bird Farm - Check RDRN website for details.

June 23 and 24: Visit to Bjorge's property. Come out for a day or the weekend. Camping is available for minimal fees. See Turkey Vultures and other prairie species. Meet 10:00 AM at the Ferry Point Campground, near Meeting Creek. There will be a potluck supper on Saturday and crepes on Sunday morning. **June 30:** Springbrook Natural Area - Take the main road into Springbrook (Red Deer airport). Meet in small parking lot just before the road curves to the right.

Judy: 403-358-1098 • Keith 403-347-6883

SIGHTINGS FROM BIRD FOCUS GROUP WALKS

April 14—McKenzie Trails Recreation Area: Canada Goose, Bohemian Waxwing, American Crow, Dark-eyed Junco, Downy Woodpecker, White-breasted Nuthatch, Blue Jay, Brown Creeper, House Finch, Boreal Chickadee, American Robin, Black-billed Magpie, Mallard, Hooded Merganser, Common Goldeneye.

April 21—Gaetz Lakes Sanctuary: Mallard, Canada Goose, American Robin, Downy Woodpecker, Black-capped Chickadee, American Tree Sparrow, Sharp-shinned Hawk, California Gull, Bohemian Waxwing, American Crow, Trumpeter Swan, Merlin, Sandhill Crane, Northern Pintail, Blue Jay, Rough-legged Hawk, Pileated Woodpecker, Common Merganser, Common Goldeneye, Northern Flicker.

April 28—Riverbend Golf and Recreation Area: Common Goldeneye, Mallard, American Robin, American Crow, Common Raven, Black-capped Chickadee, Canada Goose, American White Pelican, Ruby-crowned Kinglet, Song Sparrow, Double-crested Cormorant, Trumpeter Swan, Downy Woodpecker, White-breasted Nuthatch, Boreal Chickadee, Red-breasted Nuthatch, Black-billed Magpie, Bald Eagle, Yellow-rumped Warbler, Blue-winged Teal, Red-necked Grebe. Lesser Scaup, Herring Gull, Blue Jay, Pileated Woodpecker, Common Merganser, Turkey Vulture.

INSECT FOCUS: DON WALES

Wednesday May 16 • KWNC

10:00 AM — 12:00 PM

True Bugs, Caddisflies and maybe a few beetles



The Red Deer River Naturalists, the first natural history organization to be established in Alberta, was incorporated as a society in 1906. 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 7:30 p.m. on the fourth Thursday of most months at the Kerry Wood Nature Centre, 6300-45 Ave., Red Deer, AB. Non-members are welcome. Members are encouraged to contribute to this newsletter. The deadline is the last Friday of the month.

rdrn.nature@gmail.com www.rdrn.ca
<http://wearenaturalwise.blogspot.com>

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Photos, unless noted otherwise, by Myrna Pearman