Buffalo Lake Nature Club

Minutes September 19, 2019

Guest speaker Ashley Thorsen What are Mites; how and why do we study them?

Mark H called the meeting to order with 19 people present

Roll call:

Thomasina startled a mother moose with her calf while out hiking on her place

Bob R In mid Aug. Jan saw a White Egret at Rochon Sands also they saw 3 young owls, very white in colour, thought to be screech owls. Bob was down in southern Ontario around Point Peele Park. Epcore has huge wind farms there. The person they were visiting had 6 on his land. when they were first put up they would find several dead bats on the ground in the morning.They retrofitted the blades to cut down the vibration / sound disturbance

and now no dead bats.

Bob S had a family of Bittern nesting on the slough. His granddaughters enjoyed watching the Hummingbirds at the window feeder. They observed a male that was very territorial especially with the Gold Finches and there would be a battle at the feeder.

Bob recently has seen a coyote walk right through the yard with little regard for humans.

Karin while traveling and working in the Drumheller area she saw several pronghorns, one group of 5 animals. While at her family farm near Barhead they enjoyed watching the courting dance of the Ruby Throated Humming birds. On a trip to the Nordegg in early July she was amazed to see the profuse variety of wildflowers, and she also enjoyed listing to the song of the Hermit Thrush

Marie here

Wilma here

Wayne very large flocks of Cedar Wax Wings cleaning off the Mt. Ash berries in Bashaw

John enjoyed seeing a Bittern at the Stettler golf course.

Loreen here

A visitor stated she had snakes under her step along the drainage ditch on the west side of town. Unfortunately they were destroyed.

Susan was in Ontario cottage country and enjoyed watching the Osprey, so precise, when they dive for fish. This summer they were lucky to see Otters, and curious to see one pushing a pile of weeds along in front of it as it swam.

David here

Simone Enjoyed taking Claudia and Myrna out on Buffalo Lake to see a Bittern nest. The Bald Eagles were also nesting in the Pelican Point area this summer .

Next years goal is to go to Wainwright to see the Sharp Tailed Grouse

Unfortunately they went to Big Knife Park a day early, they enjoyed hiking in the park but missed the rest of us.

Granddaughters still watching the deer while waiting for the bus or on the walk home; startled by a cow at the cross country run at the Bashaw School.

Chris P recently was in Rumsey and saw some Barn Owls. At a wetland area near Red Willow the trees were yellow with a large flock of Yellow-headed Blackbirds. Chris is happy to report he has Shaggy Mane mushrooms in his yard.

Ashley In the Jasper area saw a Great Grey Owl and Mt.Goats with young along the road.

Anne 5 Northern Flickers in the yard.

Charley Enjoys looking for mushrooms. This summer he has hiked at Rochon Sands Park about 20 times. Today (Sept 19) he found 2 new species

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Mark seeing Antelope out East and turkeys vultures

Mark and Jen continue to help Medicine River Wildlife Centre with transporting injured animals to Judy Boyd who in turn takes them to the Centre at Raven. After the hail storm July 30 they had many calls of several injured birds. Mark reminds us if anyone is interested to volunteer for MRWC it is very interesting.

Business

Sept 29 2 pm Fall walk at JJ Collett Natural Area

Oct 23 24 Battle River Watershed Alliance is having another Finding Common Ground Tour this time not on bicycles but by bus. If anyone is interested registration is limited to 30 people so act fast. [www.battleriverwatershed.ca](http://www.battleriverwatershed.ca)

Tentative Oct 25 - 26 Nature Alberta will host a Bird and Important Birding Area ( IBA) workshop held at Kerry Wood Nature Centre Red Deer. Charley Bird will present on our Erskine Ewing Lake IBA

Next meeting October 17 Guest speaker Tim Schowalter presentation Exploring Dry Island Buffalo Jump

ASHLET THORSEN MITES

Mites are not insects as they have no wings, no antenna, no eyes, they do have 8 legs but only 2 body parts. They are part of the arachnid family

There are 45,000 mites identified of the estimated 1,000,000 species ( only about 4.5% are known.)

There are several types of mites found in Alberta, Spider mites, ticks, feather mites and predatory mites, however Ashley does not work with them.

She studies Oribatid also know as moss mites, soil mites or beetle mites. These tiny .1 mm to 1.2 mm, mites live in organic matter like soil, leaf litter, moss or in bark of trees. Most are about the size of a period ..

They are non-parasitic and are great decomposers. Mites help to breakdown plant material and are very important indicators of soil health.

Oribatid mites are prey/food for many larger animals. They increasing fertility as well as making nutrients available for other organisms.

Ashley works at the Royal Alberta Museum and the ABMI ( Alberta Biodiversity Monitoring Institute) is the program that collects, identifies, monitors and studies all species including mites.

ABMI has been collecting data for 12 years. "The Alberta Biodiversity Monitoring Institute (ABMI) track changes in Alberta's wildlife and their habitats from border to border, and provide ongoing, relevant, scientifically credible information on Alberta's living resources. For our province's land use decision-makers. For Alberta's future land stewards. For Albertans." from website <https://www.abmi.ca/home.html>

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Con’t Ashley Thorsen Mites

There are 14 specialists that study everything in these study sites including some of the following: mosses, plants, mammals, aquatic invertebrates and mites.

A few reasons why mites are used to study the ecosystems is that they have a stable adult population, with a slow population growth. Individual mites live 1 - 2 years even as old as 7 years. They live everywhere in Alberta, easy to find, do not move very much, only about 1 metre in a life time. They are very sensitive to soil moisture usually moving vertically in the soil. They preserve well and do not need dissection.

**How the mites are collected:**

Soil core samples are taken in all types of soil,vegetation and environments. They are kept cool so the species are alive when they arrive at RAM. The samples are put under lights and because the mites do not like heat they travel down into the soil where they are filtered through screens and a funnel to land in a jar of alcohol. It usually takes 7 days on the extractor to collect all the species from the sample.

In 2019 the ABMI received 400 samples. They can see several species with the eye and traditional microscope. If they need to see fine details to study new species they need to use a SEM, Scanning Electronic Microscope, unfortunately,this destroys that sample.

All the samples including the other organisms, soil, seeds and what

was in that core sample are all tagged and stored for future reference.

In 2007 there were 132 know species of Oribatid Mites, in 2019 ABMI have identified 381 species; 33 of them are new to Canada, 9 are new to North America, 14 are new species and 70 samples are pending identification.

Ashley encouraged us to make our own extractor taking soil samples and putting them under a light for a day. Put the soil on a fine mesh or screen and cheese cloth, put that on top of a funnel , the samples will fall down the funnel to the jar. No need for alcohol but the samples will be alive. You should find a variety of interesting species including micro snails, Oribatid mites, spring tail, and to help you identify what you have found go to [www.chaosofdelight.org](http://www.chaosofdelight.org)

The more diverse the species you find the healthier the soil. To increase the health of your soil add a variety of organic matter, compost and plant diversity will help to increase soil moisture retention. A good plan is to keep your garden messy.

Ashley also has been studying some soil samples found

on the Fraser Glacier in the Jasper Park along the BC border. A large foot of the glacier fell off and ended up in the valley. After a closer inspection clumps of soil were

found on it that dated about 200 years. In those soil samples were a variety of interesting species including; moss fragments, seeds, needles pollen and about 60 Oribatid Mites from 15 species. So they are guessing that the valley area may have been a forested area about 200 years ago.

If you are good with micro photography

please send pictures or follow the posts on ABMI [naturelynx.ca](http://naturelynx.ca)

For another place to help with identifying bugs go to [www.bugguide.net](http://www.bugguide.net)

You can also send pictures or get help with identification by contacting Ashley

[Ashley.Thorsen@gov.ab.ca](mailto:Ashley.Thorsen@gov.ab.ca)

Minutes and presentation summary by Marie Payne