

Magazine for the NATVREKIDS of British Columbia | Winter 2016



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COMMENTS?

I recently joined **NatureKIDS BC** as the new Executive Director and let me tell you, I can't think of a better place to be! I am very happy and proud to be part of this great organization that has made nature fun and accessible for kids and their families for the past 16 years. Like you, I love being outside, exploring what's new in my local rainforest or up in the mountains by North Vancouver,

bringing along my two young daughters. I look forward to

meeting many of you as well as hearing all about your **NatureKIDS** adventures; be it Action Award Quests, Passports to Nature, participating in citizen science projects or about the fun you have at an Explorer Day. Please keep sending us letters, pictures and drawings of what you have been up to.

I hope you will enjoy reading this winter issue of NATUREWILD and thank you so much for being part of NatureKIDS BC.

Louise Pedersen







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NatureKIDS BC is THE club for children and families who love to be outdoors.

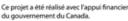
Members discover nature on Explorer Days organized by volunteer leaders and guided by experts, participate in stewardship projects, earn Action Awards and receive NATUREWILD magazine 4 times a year.

Come join us! Family membership: \$25 per year. Schools membership: \$45 per year. Or subscribe to NATVREWILD magazine: \$20 for 4 issues per year. For more information and to sign up online go to: naturekidsbc.ca

Thank you to our sponsors and supporters who share our vision that all children be connected with nature.



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Province of British Columbia

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WHAT'S UP WITH

by Kristine Webber

Canada is home to an amazing 25 species of birds! Some live here year round, others are just stopping by to rest and re-fuel during their lo-o-o-ong migrations.

Sadly, many bird species are in trouble - some populations have declined by over 90%! *Loss of habitat* and *climate change* are BIG reasons for numbers going down and will take all of us working together to solve.

Luckily, there are things that you - and your family - can do right now to help the birds.

Ways you can help birds!

- Create more bird friendly habitat. Plant native species that provide food for birds, bees, bugs, and other wildlife throughout the year.
 Where possible, leave wildlife trees for nesting and resting.
- Provide water for drinking and bathing.
- Don't use pesticides or herbicides these will kill off bugs that birds need for food.
- See pages 6 and 7 for more ideas,
- Here is a big one ... keep BIRDS safe from CATS!

Cats are a real threat to birds!



Cats have a strong hunting instinct because originally they needed to hunt to survive. Today's pet cats don't need to hunt for food - they do it because it's their instinct to pounce and kill small mammals, birds, lizards and snakes. The damage done by one outdoor cat may not seem like much but when you add up kills among the 8.5 million pet cats and 4 million stray and feral cats (cats without owners) in Canada, the impact is enormous and one of the worst threats to birds. Scientists estimate that free-roaming cats kill approximately 200 MILLION birds across Canada

every year. Yikes, that is a LOT of birds! This is one threat that pet owners can do something about – keep your cat indoors! There are benefits for cats too because...

An outside life is dangerous for eats!

There are many dangers to cats when they go outside. Outdoor cats can be hit by cars, chased by dogs, hunted by coyotes, get into fights with other cats and pick up diseases and parasites. According to the SPCA, indoor cats live longer and healthier lives than outdoor cats do,

Important! Always spay or neuter your eat. For more tips and suggestions go to www.eatsandbirds.ea/



THE BIRD

If you want to make your cat an indoor pet, it is easiest to start when it is a kitten but many adult cats can adapt to life indoors too. And the cold wet winter season, when cats are happy to be indoors, is a good time to start.

Here are a few tips:

- Gradually reduce the amount of time your cat goes outside
- Create a fun indoor environment for your cat with lots of toys and playthings such as stuffed toys, empty boxes, balls, etc.
- Make a viewing platform or place where your cat can look outside
- Spend time playing and interacting with your cat
- Keep your cat's nails trimmed and provide a scratching post
- Make sure the litterbox is always clean

What if my eat just won't stay indoors?

Even if you want to keep your cat indoors, some cats just can't adjust to being indoor cats. Here are some safer ways you can let your cat outdoors:

- Build a Catio (an enclosed patio) or cat enclosure for your yard so your cat can enjoy being outdoors;
- Teach your cat to walk with a harness and leash;
- Reduce the number of birds your cat kills by using a colourful scrunchie cat collar or cat bib.

How does the scrunchie collar save bird lives?

Birds can see colour really well. In fact they see colour way better than you or I can. The colourful scrunchie collar makes it much harder for a cat to sneak up on a bird.





Take action with Bird Aware Cat Care to save birds and keep cats safer!

All across BC, NatureKids members just like you are taking part in a Citizen Science project to test how much harness-walking, cat bibs and scrunchie collars can reduce the number of birds killed by cats.

> Nature KIDS BC is looking for more junior scientists to take part in the **Bird Aware Cat Care Project**. If you have a cat and want to help save birds, email: citizenscience@naturekidsbc.ca and we'll tell you how join the project.



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sale 123

Birds Sefe

MIEI YOU ENVITE WINDS TO YOUR CAMPEI -

As a good host, you want to keep your guests safe and healthy. The main dangers that face birds that come to your feeders are: (1) windows (2) predators and (3) illness.

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Glass reflects the sky and trees around and confuses birds; they see a place they can fly through, not something hard. Place your feeders either (a) more than 10 metres from glass – this is too far for confusing reflections; or (b) closer than one metre - too close to build up enough speed to hurt itself, even if the bird does bump into the glass.

You can also make the glass less clear or reflecting. On the outside of the glass, hang streamers or place several static-cling decals, especially those that reflect ultraviolet light – birds can see this even though we can't. Inside you could paint a scene with soap or hang a mobile (see next page).

2) Vredaters

Place your feeders carefully. As well as distance from windows, think about the birds that come and where they prefer to feed.

Feeders placed close to natural shelter such as trees or shrubs offer resting places for birds between feeding bouts and a quick refuge if a hawk flies through. Close but not too close – far enough away so squirrels or cats can't jump over to the feeder.

Many birds are ground feeders. They come to feeders but they will also pick up fallen seeds on the ground below the feeders. Protect these birds by hanging the feeder over close – planted shrubs or a pile of prickly rose or blackberry trailers so cats can't lurk underneath.

3) Illness:

Birds can get ill from leftover bits of seeds and hulls that become mouldy or from droppings that collect on feeder trays. Clean your feeders about once every two weeks. Take them apart and wash with soap and boiling water, then scrub with a clean bottle brush. Rinse and dry before refilling. Clean water dishes too.





Bottle brush: Credit - stevendepolo, C.C.

GITE for the WINE and for your bird-loving friends.

Color A Color

It's fun to make a mobile from a mixture of natural objects like cones and leaves, mixed in with other things to add some colour. Hang the mobile in front of your patio door or inside a picture window to prevent birds from flying into windows.

Besides the twigs, leaves and other objects, you will need some string, fishing line or kite string. Very small eyelet screws for the cones will make hanging easier. Tip: Lay leaves between two sheets of wax paper and press with warm iron. The wax will help preserve the leaves.



Birds love suet. If you do not live near a wild bird store, you can make your own suet cakes.

Melt together on low heat, and stir to blend:

- 2 cups chunky peanut butter
- 2 cups lard (such as Tenderflake, not vegetable shortening)

When fat is melted, turn off heat. Add the dry ingredients one at a time, mixing well after each addition:

- 2 cups flour
- 4 cups corn meal
- 4 cups oatmeal ("quick" oatmeal holds the cakes together better.)

Blend all ingredients thoroughly. Press mixture into a 9-x-13 inch pan.

Cool and cut into squares. Wrap the squares loosely in wax paper. Keep in fridge or freezer until needed. Place in suet baskets. CAUTION: hang the

cakes where they will stay dry. If the ingredients get wet, they will go mouldy.



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> Mixing peanut butter and lard: Credit sarahdoow, C.C.





- 1) A Christmas Bird Count for Kids in your town this year www.birdscanada.org
- 2) The 20th Annual Great Backyard Bird Count February 17-20th, 2017 gbbc.birdcount.org (More details at www.naturekidsbc.ca in January.)

You'll get to practice your birding AND you'll be helping scientists understand more about what is happening with local bird populations year by year.



YOUR CLOSEST NEIGHBOU

by Brian Herrin

Can you imagine living your whole life inside a dust bunny? Some of the smallest animals in the world do! They are tiny eight-legged arachnids, relatives of spiders and ticks called **dust mites** (*Dermatophagoides sp.*).

Humans didn't know they existed until Anton von Leeuwenhoek invented the microscope in 1694! They are so small that two or three could stand on the period at the end of this sentence.

THE CUTTINATE RE-USERS AND REGIGLERS

Dust mites can eat almost anything they can get their mouthparts around and they are able to suck up miniscule water droplets or water found in moist air. They'll eat anything that was once living, so any feather fragments, pet hairs or crumbs they find are huge storehouses of food for them.

Body parts of insects, skin fungi, moulds, pollen, bacteria and fragments of plant material are also great food for dust mites. Even their own dung pellets are eaten up to four times before there is little left in them for the mites to use.

Dust mites eat the flakes of dead skin that we humans shed every second of our lives. Even a young person like yourself sheds over half a gram of dead cells a day.

Dust mites eat what other creatures will not, so they never die of starvation! In turn, dust mites are eaten by silverfish, larger mites and pseudoscorpions (another kind of small arachnid), all part of nature's amazing re-cycling system where nothing is ever wasted.



If you do want to see a dust mite you will need to use a magnification lens of at least 10X. Using a dissecting microscope at 20X or a compound microscope at 40X will make it easy.

Mites: Credit - Spencer Entomologica ©ellection , UBC

R-THE MIGHTY DUST MITE.

LIFE COTCUE

The mite life-cycle goes through five stages which are controlled by temperature. The warmer the temperature, the quicker the life cycle will progress. A balmy 25°C and relative humidity around 75% is the perfect climate for dust mites.

A mite begins life as a fertilized egg which takes about 5-8 days to hatch and about 20 days to become an adult. Males live about half as long as females, who can live up to three months. After only one day as an adult, the female mite is able to mate and breed, laying up to 100 eggs during its lifetime.

IDEAL LIFE COLDITIONS (FOR DUST ANTESS)

Mites love warm, humid areas that are close to humans or pets such as beds, pillows, mattresses, carpets and sofas. As you breathe you are adding moisture to the air and that is why you will find most dust mites in your bedroom. A mattress may contain several million mites. One

biologist has stated that ten percent of a six year old feather pillow may be composed of dust mite bodies and their droppings – which they produce up to twenty times a day.

Dust mites do not do well in dry air. At 60% humidity or lower the mite population stops growing and dies out. Warm air can hold more water vapour than cold air so there are very few dust mites in cold environments.

NOT SO IDEAL LIFE CONDITIONS (FOR MINIMUS)

Dust mites leave droppings everywhere they go and these, plus their cast skins from moulting, create "mite dust". While these tiny scavengers help the earth recycle skin flakes and much, much more, mite dust itself has a huge impact on many humans who cannot tolerate the enzymes in it; it causes allergies and is said to be the most important cause of asthma worldwide.

Dust mites can be controlled by knowing they don't do well in dry and cold air. The mites are depending upon us to ignore them – if we can, but I wonder – is out of sight out of mind?

Credit - limaoscarjuliet, C.C

If you suffer from dust mite allergies, there are lots of articles on the internet that will help you to lessen their number in your home.

Don't forget to Vaccum: Credit - Rasulovs , iStock.com

Doggie Bed: Credit - Mojave Desert, C.C.

Geode: Credit - The Wild Roam Free, C.C. A geode looks like an ordinary roundish rock, but if you split it open, inside you can find beautiful and colourful crystals such as calcite, pyrite, opals, and celestite.

The crystals most often found are many kinds of quartz, such as amethyst.

In size they range from just a few centimetres to several metres. The world's largest amethyst geode is in Australia. It is named "The Empress of Uruguay" and is 3.7 metres tall and weighs 2.5 tonnes (more than two VW Beetles). However the largest geode in the world is in Put-in-Bay, Ohio, located on Geode Surface; Credit . the south side of Lake Erie. This geode is so large that you can walk into it!

HOW ARE GEODES FORMED?

Geodes are created in the hollow areas of soil such as animal burrows or tree roots. They are also formed in the bubbles in volcanic rock. Over long periods of time, dissolved minerals seep into a hollow area and harden into an outer shell creating the geode. The minerals continue to form on the inside walls of the shell, growing towards the center.

It can take hundreds of millions of years for the space inside a geode to be filled, and many geodes remain partly hollow. A geode which is completely filled with crystals is called a nodule. Agate-filled nodules are called thunder eggs.

CAN I FIND GEODES IN EG?

Geodes can be found in many places in BC. Go to the website of the BC Lapidary Society (http://www.bclapidary.com/) for information and to find the nearest club.

IF I FIND A GEODE, LIOW DO I OPEN IT?

There are several ways (see http://www.wikihow.com/Crack-Open-a-Geode) but you will need an adult to help you, otherwise you may end

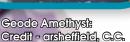
up with a smashed finger instead of an open geode!

Geode: Credit -SETShots, C.C.

you find a geode - just think in your hands you are holding a piece of Earth which is millions of years old - about as old as the Earth itself!

Deidre Woollard, C.C.

background, Purple quarkz Credit -ClaudioVentrella, iStock.com





When we think about fossils, we usually think about the kind of fossils that are found in rocks and minerals. But there is another way that animals and plants are preserved as fossils. They are trapped in a sticky stuff called resin which oozes from trees.

Resin is not the same as sap. Sap is the sugar that feeds the tree. Resin is a liquid which is stored in the outer cells of trees. When a tree trunk is damaged or when a branch is cut, clear resin oozes out and gradually becomes hard, sealing the broken area, much like the way blood clots when you scratch or cut yourself.

Resin is also extremely sticky when it oozes out. If you have ever got some on your hands or clothes you'll know how difficult it is to get it off. So sometimes insects or bits of plants get stuck in the sticky resin.

Over thousands and thousands, sometimes millions, of years the resin fossilizes into the beautiful clear rock-like material that we call amber, sometimes with the little insects or pieces of leaf still in it.

People go hunting for amber in many different areas of the world, and often make their finds into jewellery. If you are lucky enough to find or be given a piece of amber with an insect in it, think about how amazingly ancient that little creature is.

Fossils: Credit - benoudman, C.C. Amber Resin: Credit -Dietmar Down Under, C.C. Resin; Credit - Oilbac C.C. Amber lump: Credit - James St. John, C.C. Spider in Amber: Credit Floortijy Walraven, C.C. Ant in Amber: Credit - Macroscopic Solutions, C.C.

If you are interested in fossils, a great place to visit is the Fossil Collection in the Pacific Museum of Earth, at UBC. The collection includes some specimens from BC's famous Burgess Shale that are about 505 million years old as well as fossils from all over the world.



Credit - David Shackleton, B.C.

Now you see me

In the far north of British Columbia, in the forest, lived Hare. She came out to eat at twilight; she especially liked to eat the grasses and shrubs that grew along the edges of the forest. This was dangerous because Lynx, who lived in a den nearby, was always on the prowl for fat little hares. Luckily, Hare's brown-grey fur was hard to see when she hid under the shrubs.

Lynx was always on the prowl





Pipit and Hare were a streaky brown colour.

She had a friend called Pipit who liked to eat the seeds of the nearby grasses. Pipit was a streaky brown colour like the hares. When Hare and Pipit stayed very still, you couldn't see them at all.

"Winter's coming," said Pipit one day,
"Soon the snow will be here. I must leave
for the warmer meadows down south."

"Snow?" said Hare. "But snow is white.
I am brown. Lynx will spot me if I stay
here. Let me come too," she begged.

"Come along then," Pipit flew off and Hare ran along after him; but soon the cold winds blew Pipit further and faster than Hare could run.

"Wait!" she called, but Pipit didn't hear her. Hare was left all alone and afraid.

"I don't want to be caught by Lynx," she said.
"What am I to do?"

She hid herself away under the shrubs and bits of her fur started to fall out with worry.

A thick white blanket of snow soon covered the landscape. Under the shrubs, Hare grew hungry.

"Maybe I'll be safe if I hurry," Hare said. She darted out to eat some willow twigs that were poking out of the snow. Just as she took a nibble she saw Lynx trotting across the snow.



You could hardly see them at all.



Bits of her fur started to fall out.

Hare stayed as still as a statue. "Please don't see me, please don't see me," she whispered to herself.

And then...Lynx had gone past her, back to his den.

"I thought he would spot me for sure," Hare sighed.

"Why would he?" said a voice.



She saw lynx trotting across the snow.

Hare looked around. She couldn't see anybody. "Who said that?" she asked.

Snowshoe Hare: Credit - DenaliNPS, C.C.



It was another hare!

"I did," said the voice. It was another hare! His fur was as white as the snow.

"I didn't see you!" gasped Hare. "If only my coat were as white as yours, I wouldn't have to worry. I would be hidden in the snow."

"But it is," said the white hare, kindly.

"No," said Hare, sadly. "My fur is brown, not white."

"Look at yourself," said the white hare.

Hare looked at herself in a frozen puddle.

It was true. Her fur was white. That was why Lynx hadn't seen her.

"Every winter, we hares grow white winter coats to hide us against the snow," said the white hare."

"So when my old fur fell out, it wasn't from worry?" asked Hare.

"No," said the white hare. "You were growing your new winter coat. And in spring, when the snow disappears, you will grow another brown coat."



Hare smiled to herself. She was no longer so worried about winter. After all, everything was going to be all white ...including Hare.

DenaliNPs, C.C.

Snowshoe Hare: Credit -

It was true. Her fur was white!

Al Grass: Credit -Robert Alexander, B.C.

Have a Nature Question?



Al Grass has worked as a career park naturalist and ranger throughout BC.

Now he is a well-known nature tour leader and photographer. Al especially likes birds, insects and spiders.

What is the difference between a red squirrel and a Douglas Squirrel?

I love squirrels, they are so much fun to watch - always busy, going about their business of gathering food, or chattering loudly to warn of predators such as large owls, hawks, long-tailed weasels and American marten.

In BC we have two related squirrel species – American red squirrel (Tamiasciurus hudsonicus) and Douglas Squirrel (Tamiasciurus douglasii). How to tell the difference? The red squirrel's eye rings and tummy are white; the Douglas squirrel has orangey eye rings and tummy. Both feed on a variety of foods such as conifer seeds,

berries, bird's eggs and mushrooms. Squirrels can eat mushrooms that are poisonous to other creatures without ill effect! They will often pick and dry the mushrooms and cache them with cones in their 'larder' for winter use. In the forest, piles of cone scales (called "middens") show where squirrels feed.

For more information visit E-FAUNA: http://ibis.geog.ubc.ca/biodiversity/efauna/

Red Squirrel: Credit - Al Grass, B.C.

Squirrel Midden: Credit - hthrd, C.C.

Dr. Eucan Doowitt invites you to join him in an experiment:

Do Feeder Birds Prefer Different Colours of Food?"

For this experiment we need rice and food colouring.

- 1. Ask an adult to cook a cup of rice without salt (salt is bad for birds).
- 2. Place a dish of cooked rice outside, near your bird feeder.
- 3. See if the birds will eat it. If they do, then...
- 4. Mix a drop or two of food colouring into a tablespoon of rice.
- 5. Do this with four colours so you have five colours in all, including plain rice.
- 6. On a dish spread a tablespoon each of different coloured rice and plain rice.
- 7. Stay and watch from a distance (use binoculars if you have them).
- 8. Chase away any large birds that might ruin your experiment.

Do let me know if you find they prefer certain colours. Your tally chart might look like this:

Nov 30 Weather cloudy but warm at 14°C

Bird types	Number	Time	Plain	Red	Yellow	Green	Blue
Sparrow, juncos	1 + 5	2:43 2:55	some	almost all	none	all	none

Remember - You can do it! (But get permission first)

Carter Committee Comm



Rice at the

begining

NATUREWILD-MENS

Passports to Nature

Kiaera, Charlotte, Paige and Lewis (Otter HL), Orson & Joey (Nicomekl), Saraya (Prince George), Alberto & Maite (N. Vancouver), Kyla, Eden & Rowan (S. Okanagan), sent in passports #1 & 2 and Shelby (Nicomekl), Isaac (E. Fraser Valley), Raco & Violetta (N. Okanagan) also completed passport #2 – all seven earned their **NatureKIDS** caps! Maya (Delta HL), Robin, Owen, and Heather (Nicomekl) earned their Rite in the Rain notebooks for completing passport #4. Elissa sent in passport #16. **Amazing effort, everyone** – what a lovely summer and fall you must have had, being outdoors so much!

NKBC Prince George did the amphibian survey. They enjoyed being outside in the dark, looking for frogs and toads.

In September NKBC Kelowna went out on a Hike for Health in Mill Creek Regional Park. They had a wonderful time finding different insects, climbing over rocks and logs, racing twigs in the river. Shaw Cable made a video

https://youtu.be/znpypZIJmvs





Williams Lake: Credit - Verena Reznicek, B.C.





Prince George: Credit -Gail Ross, B.C.

- 11 members of **NKBC Eastern Fraser Valley** earned their Bronze Action Awards! Congratulations, Nemo, Sigourney, Tanner, Corbin, Ava, Emma, Paige, Emily, Rowan, Isla and Owen.
- In August 24 members of Williams Lake NatureKIDS had an awesome fieldtrip to the caves near town. We did not find any bats as they had already hibernated, but we had a great time walking in the dark with our flashlights and we found lots of toads in the puddles.

WELCOME! To two new NatureKids clubs – Ridge Meadows (Maple Ridge/Pitt Meadows) and Otter Home Learners (Langley, Abbotsford, & Aldergrove) (see www.naturekidsbc.ca for details)

Observe Birds That Come to Your Feeder

In the wild some birds prefer to feed on the ground, some never go on the ground, a few will feed on the ground and in shrubs and trees. Most birds will come to a feeding tray raised well off the ground. Carefully observe the birds you have invited to your garden and where they prefer to feed. This will help you place your feeders in the best places to keep birds safe from predators.



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