

Magazine for the NATUREKIDS of British Columbia | Fall 2018

The Blob! The Creature from Lost Lagoon.





# AND MORE





Take a look INSIDE!

# INSIDE...

THE BLOB (3) WE BUILT A NEST 4-5 REDV(E O(EAN PLASTI( DR. DOOWITT ANTLERS VS HORNS WORD SEAR(H NECTARIES READ ALOUD STORY ASK AL MAKING AN OWL NEST NATUREWILD NEWS PLANTS & PRI(KLES)

Cynthia Berg, President president@naturekidsbc.ca

Louise Pedersen, Executive Director louisepedersen@naturekidsbc.ca

Christina Chowaniec, Program Coordinator coordinator@naturekidsbc.ca

Niki Dun, Membership and Office Coordinator: info@naturekidsbc.ca

NatureWII D Editorial Committee naturewild@naturekidsbc.ca

Editorial Board and Contributors: Daphne Solecki: Kristine Webber: Brian Herrin; Tricia Edgar, Simon Briault and Al Grass.

Design & Production: Alison Garrad

NatureKIDS BC Head Office 1620 Mt. Seymour Rd. North Van, BC V7G 2R9 Tel: 604-985-3059



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Over this past spring and summer, NatureKIDS BC members learned about pollinators through our pollinator citizen science project. We learned about wild pollinators, how to identify different species and how to collect data.

As we collected information about bees, wasps, and butterflies in green spaces in our



local areas, we learned how super-important pollinators are in food production and the health of local ecosystems. We also got involved in stewardship activities that increase pollinator habitat. The data we collected over the course of 15 events were analyzed by our project biologist Erin Udal. Her final reports were shared with local partners such as municipalities, parks, garden societies, and private land owners. They may then use the information to make good choices about how to manage habitat and how to support pollinator diversity.

Thank you to everybody who took part!







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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: \$35 per year. Individual adult membership: \$25 per year. Or subscribe to NATUREWILD 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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Front Cover photo: Bighorn: David Shackleton, B.C. • Bottom Images L to R: Blob: Michael Schmidt, B.C. • Owl: Robin & Linnae Melnyk, B.C. • Bumble Bee on Clover: Michael Schmidt, B.C.



#### Stanley Park Ecology Society • Photographs: Michael Schmidt

Last year in mid-August, the Stanley Park Ecology Society hosted a BioBlitz. During the BioBlitz, teams of experts and citizen scientists explored different ecosystems and habitats to help add to the list of all living things in Stanley Park. Sometimes surprising discoveries are made during a Bioblitz, but nobody expected to find anything this weird in Stanley Park....



This most unusual organism, a **bryozoan**, is actually a colony of thousands of small, microscopic individuals called **zooids**. The colony looks like a giant brown 'blob' and could grow to be almost the size of a volleyball. One had never before been officially recorded in Lost Lagoon until the BioBlitz.

It was soon nicknamed **The Blob**. Because of a news story accompanied by Michael Schmidt's photos of its brain-like appearance and slimy surface. The nickname was copied and re-reported in newspapers around the world.

**Bryozoan** colony members cooperate and work together to perform different functions - much like the organs (lungs, stomach, liver, etc.) of other animals. They are filter feeders and sift out plankton and organic material by sending out a loop of hair-like tentacles into the water. Any food these loops gather they share with the entire colony.

The amazing part of the story is that the original bryozoan 'bit' probably came into Lost Lagoon on the foot of a migrating water bird! Other examples of bryozoans have been found in the interior of the province in similar freshwater habitats. With the poop from all the birds and the large carp that swim there, Lost Lagoon is a rich food source for the plankton on which these water either food

on which these water sifters feed.

The next time you are in Vancouver's Stanley Park, take a walk around Lost Lagoon and look into the shallow water to see if you can spot a **Bryozoan Blob!** 

For more pictures of wildlife go to: www.michaelschmidiphotography.com



MYSTERIOUS FLOATING BRAIN-SHAPED CREATURES ARE WASHING UP IN A CANADIAN

'Dragon Booger' Emerges From Lost

It's the first time bryozoans have been seen in Vancouv

newser

Lost Lagoon

Last seen here!

The Blobs



By father and daughter team, Robin and Linnae Melnyk (Kelowna)

#### Why Build?

- We often hear and see Great Horned Owls in our neighbourhood.
- These owls don't build their own nests, they use abandoned hawk or crow nests.
- We thought it would be fun to make a nest for owls in our own back yard.

#### How?

- Online we found Canadian Wildlife Federation instructions for building a nest.
- We collected sticks, red-osier dogwood, willow and lichen. Bought supplies.
  - Built the nest, lined it with lichen and cedar and made sure there were branches sticking out for baby owls to hold onto! (See more about building a nest on page 14)

### Then?

We finished the nest in winter 2015 but it was extremely cold and snowy so we waited until the fall of 2016. The nest was fastened 25 feet up in the branches.



### The Nest Is Taken!

A pair of Great Horned Owls arrived and took over the nest in February 2018. After a few days we knew the female had laid eggs because she didn't leave the nest for over 40 days except for about 15-20 minutes every night just before dark.

The male hunted every night and brought food to the female in her nest. He slept all day while she shifted around on the eggs. He always slept in a different tree away from the nest.

### The Eggs Hatch.

- The eggs hatched in the first week of April after Easter. We couldn't see the babies hidden in the nest but we could hear them make soft screeching noises.
- The female started to leave the nest to help hunt. She hunted on and off throughout the day and at night. The male only hunted at night and slept all day.



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#### We See Them.

At the end of April, about a month from the time they hatched, we saw a baby's head sticking up out of the nest. Over the next few days we realized there were **three** owlets!

Once we watched one of the babies eat an entire mouse, head first! It had to jump up and down and shake its head to swallow it – quite a sight.



We learned that the owls store dead animals in the bottom of the nest and eat them when they are hungry. We watched mom do exactly this, stripping off pieces of flesh and feeding them to her young.

#### The Owlets Walk!

On May 13, 42 days after hatching, we watched owlet #1 climb out of the nest and stretch her wings then immediately climb back in. By the next day owlet #2 was also adventuring out of the nest.

Owlets #1 and #2 spent the next week jumping, walking and flapping their way up and down, in and out through the tree. We would see them way up high and down near the nest.

#### The Owls Leave.

A week later, owlet #1 was sighted walking around the yard on the grass. She climbed the chain link fence and walked away, using the fence top as her road.

Both parents supervised and brought her food. She slept in a bush touching the fence.

The next day owlet #2 left the nest and also made his way along the top of the fence. Owlet #1 popped out of her bush onto the fence to greet him.

Three days later owlet #3 finally left the nest and fell high from the top of the tree, cartwheeling downwards and grabbing branches with her beak and talons on the way down. Then she too climbed the fence and made her way in the direction of her siblings.

We saw the owls once again, sitting on a house balcony railing early in the morning but we haven't seen or heard of them since.

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# 5 Easy Substitutions Your Family Can Make to Reduce Ocean Plastic

As a society, we are addicted to single-use plastic and it is damaging ocean ecosystems, individual species and even our own health. With 8 million tons of plastic waste entering our oceans every year, urgent action is needed! You and your family can help by using alternatives to single-use plastics and advocating for changes that will eliminate them.



Turtles sometimes mistake plastic bags for jellyfish

Here are 5 easy swaps you can make at home!			
ltem	Better Choice	Even BETTER Choice	
1) Plastic Toothbrush.	Use a toothbrush with replaceable head.	Use a bamboo or wooden toothbrush - they are even compostable!	
2) Single use water bottle.	Use a re-useable non-plastic water bottle.	Bottle? Use a glass or drink from a fountain or tap when one is handy.	
<ol> <li>Disposable straw.</li> </ol>	Ask for a paper straw or bring your own stainless steel or unbreakable glass straw* *TIP: keep the inside of your straw clean with a long thin natural bristle brush.	Skip the straw!	
4) Lunchbox choices.	Don't buy single serving snacks (like cheese sticks); pack your own in a re- useable container.	When you run out of re- useable plastic storage containers, buy glass replacements. For lunch boxes get steel containers. At the grocery store, look for foods that are not wrapped in too much packaging.	
5) Plastic Carry Bags.	Use paper bags or boxes instead.	Bring carry-bags for groceries. Always carry a small foldable bag in your purse/backpack for unexpected purchases.	

#### Can you think of more ideas? Post your ideas on **#rethinkplastic #naturekidstakeaction**

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Photo credits: Turtle: ahisgett, Plastic Bag: polandeze, Jellyfish: lucas, CC • Bamboo toothbrushes: Olga\_Anourina - Water bottles: avi\_gamliel - Straws: nalinratphi - Glass container: heinteh - Shopping bag: diane39 -Background: Alfredo Allais, istockphotos.com

# Dr. Doowitt asks: Is It Biodegradable? Check It Out Yourself!

In nature every once-living thing - plant or animal - is biodegradable and returns its material to the earth to be recycled.

Does that happen with man-made things labelled `*Biodegradable*'? Do they break down into their original material? We are told that will happen but how long does it take? How can you find out for yourself?



You need to find some things you think might be `biodegradable' and test them.

That is what I am going to do - I want to find out about a biodegradable dog waste bag from a dispenser at a nearby park. It looks as if it is made of plastic but the manufacturer calls it an **'oxy-biodegradable poly'**. They claim it will degrade and then biodegrade if it is exposed to sunlight and should be gone in two months to a year. I will test a cardboard bowl as well for comparison.

I took two dog waste bags in order to keep one as the **'before'** control to compare with the bag being experimented with.

control to compare with the bag being experimented with: My experiment is titled 'How long do a 'biodegradable' doggy-do bag and a cardboard bowl take to disappear?' I think that if I stake them down outside on the soil, they will start to degrade by the end of summer, and will have disappeared within a year.

I will also bury some other things to see what is or isn't biodegradable. I will dig them up at the end of summer to see what is happening. Why don't you do your own experiments too? Keep notes and photos, and send me your results. I will report my results in a later issue.

Doggy-do bag and paper bowl staked down in a sunny place on July 5th, 2018. What will it look like at the end of August?





Fourteen items to be buried for a few months. Which ones do you think won't change at all?

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Fallen apples rot on the ground

Photo credits: Brian Herrin, B.C. • World: noipornpan, istockphotos.com



Wapiti, also called elk.

Bighorn Sheep.





## Story by David Shackleton

Many hoofed animals such as cattle, sheep, bison and deer have strange bony things called antlers or horns growing out of their heads. Have you wondered why animals have these antlers and horns and how they grow?

# What's the difference between antilers and horns?

Antlers and horns don't just look different - they are completely different in the way they grow.

## Anilers:

Deer grow antlers. Antlers are solid bone structures that grow out of the skull in spring and summer each year, and then fall off after the mating season. Antlers start very small and have a velvety covering which carries blood to help the antlers grow. Antlers usually have pointed branches (tines) coming off a main beam. Except for caribou, only male animals grow antlers and each year the antlers get bigger and bigger.



# Homs:

Cattle, sheep, goats and antelopes grow horns which they keep. Horns are made up of two parts - a bone core and a keratin\* sheath (cover). Each year a new keratin sheath grows over the bone, so that the horn gets bigger and bigger as the animal grows older (See illustration below). BMale and most female animals grow horns, but male horns are usually much larger than female horns. (\*Keratin is the same material as our finger nails.)



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## Why do antlers fall off and re-grow while horns just get larger and larger?

There are two reasons: (1) antlers often break and can't be mended, and (2) because of the way they grow, antlers would not grow larger each year like horns do, so the older larger deer would only have the same size antlers as the young deer.

3kg SUGAR Have you thought about how heavy those antlers and horns must be to carry around? The average adult male Northwestern Moose in BC weighs around 473 kg, and the antlers may weigh around 20 kg. This would be like an adult male human wearing a hat weighing 3 kg - all day and all night. Try it!

> An adult male Rocky Mountain Bighorn Sheep can weigh up to 120 kg or more and their horns can weigh up to 14 kg, In comparison with a moose with antlers, Bighorn Sheep are carrying more weight in their horns, which never fall off. At least moose get a rest in winter!

## WHY do animals have antilers or horns?

You might think animals have horns and antlers to protect themselves against predators, In fact, while they are sometimes used for protection they are mainly for competition. Males use their antlers and horns to fight head-to-head with other males for the chance to mate.



**Antlers** with their sharp tines can be used for stabbing, but more often the two males lock antlers with each other; wrestling head to head trying to knock each other off balance, only then the winner might try to stab the loser.

Male animals with large **horns** use them to bash against their competitors, while those with sharp horns try to stab each other.

es Darwin was one of the first to realise what horns and antlers were actually for. bught about why there were so many different types. He reasoned that if they weapons for protection against predators, then why were there so many nt types? The best for protection would be sharp stabbing types, but most and horns are not like that.

o observed that in most species (a) females either had very small weapons or at all, and (b) males did not defend females, and very often did not even live nem and their young.

Female Fallow deer.

David Shackleton (Ph.D.) and his students at UBC worked with many species of large mammals. He is the author of the Royal BC Museum's Handbook "Hoofed Mammals of British Columbia".



BIG HORN SHEEP North America

# Antlers and Horns Wordsearch Puzzle

Mammals with hoofs are called **Ungulates** (from the Latin word **ungulā** 

which means 'having hoofs'). Some ungulates have horns or antlers,

others - such as camels, horses, pigs and donkeys - do not. There are

native ungulates in most countries around the world except Polynesia,

Australia, New Zealand, Hawaii and of course Antarctica. See if you can find the 12 horned or antlered ungulates hidden in the puzzle.

MOUNTAIN GOAT North America



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PRONGHORN North America



WAPITI North America





CHAMOIS Europe



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FALLOW DEER Europe

GORAL - Asia

IBEX - Europe

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YAK - Asia

Photo credits: David Shackleton, B.C.

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# Nectaries

#### Pollinator Fuelling Stations - by Brian Herrin

Just like cars, many insects and hummingbirds need constant supplies of fuel – except *their* fuel is a sugary liquid called **nectar** that they collect from blooming flowers.



To reach the nectary inside the base of the petals, the pollinator (*bird or insect*) pokes around with its tongue and bumps against the stamens and the stigmas. This means the pollinator gets dusted with pollen that it can carry to other similar flowers or leaves some pollen it has already gathered. Either way, the flowers both get and give pollen.

To keep pollinators coming back time after time, most flowers refill their nectary every few hours to make sure their nectar supply is kept topped up. It would not help pollinators for a flower to run out of nectar!

Flowers time their topping up to allow for rainy days when pollinators stay home and when blooming times last several weeks.

More and different visitors to blossoms means a greater chance pollen will reach the sticky stigmas of plants of a similar species and fertilize the ovules that will grow into seeds. The plants trade nectar and pollen as a way to get some of their pollen spread over large distances.

Once a flower wilts and dies, it stops producing nectar.

Flowers that are pollinated by hummingbirds produce more nectar than insect pollinated ones! Can you think why this is so? Some ants, bees and birds have become nectar thieves! They chew tiny holes in the base of a flower to get nectar and never get near the pollen in the anthers.

n

Photo credits: Sandwasp drinking nectar & Anna's humming bird sipping from honey suckle: Rosemary Taylor, B.C. • Bumble bee on flower: Michael Schmidt • Bee on anthers: Gordon Gore, B.C.



Raven will eat anything including your lunch! Photo credit: Rosemary Taylor, B.C.



Douglas Squirrel enjoys a favourite snack - a truffle! Lucky squirrel! Humans love truffles too. Photo credit: Robert Alexander, B.C.

Banana slug nibbles on a mushroom. Photo credit: credit Rosemary Taylor Northern Harrier is a meat eater. Here he has a mouse. Photo credit: K Schneider. CC



Mother Black Bear munches on mountain blueberries - her cub is right behind her, hiding in the bushes. Photo credit: Rosemary Taylor, B.C. River Otter crunches down a crab. Photo credit: Robert Alexander, B.C.

Robin brings home a tasty squishy bug for his nestling. Photo credit: Rosemary Taylor, B.C.





All bears enjoy salmon. Photo credit: Dave Hollis, B.C.



Carnivorous sundew with fly. Photo credit: Todd Canahan, B.C.



Ants drag a dead bumblebee back to their nest to feed their colony. Photo credit: Nick Baccante, B.C.



Snowshoe hare enjoys nibbling on grass. Photo credit: Gordon Gore, B.C.

Female Rufous Hummingbird sips nectar from honeysuckle. Photo credit: Robert Alexander, B.C.

> Bald Eagle is not too proud to eat Bald Eagle is not too proud to eat Ieft-overs from someone else's meal. Photo credit: Rosemary Taylor, B.C.

Coyote is a hunter - his dinner today looks like a ground squirrel. Photo credit: Maggie.Smith, CC

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



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.





# Do Sapsuckers really suck Sap?

The short answer is not really - - they actually lap up sap with their brush-like tongues. Sapsuckers drill small holes, or `wells', in the bark to allow the sap to ooze out. It often looks as if the tree has been "peppered" with a shot gun. Sapsuckers have other ways of feeding including:

- 1. Feeding on insects (like ants) that are attracted to the sugar-rich sap in the wells.
- 2. Probing bark crevices.
- 3. Fly-catching such as ants, moths, flies, etc.
- 4. Eating fruit huckleberries, blueberries.

Perhaps sapsuckers should be renamed "saplappers"?

Photo credit: Red-breasted Sapsucker: AI Grass, B.C. (Mount Seymour Provincial Park)

How to build an own nest

- Construct a cone from a 1 m square piece of chicken wire. Start by cutting from one corner to the centre and then overlap the two cut edges until the cone is approximately 0.5 m deep. Hold the cone together, using pliers to bend the cut ends of chicken wire around the overlying wire.
- Line the cone with a 1 m square piece of tar paper. Cut from one corner to the centre of the tar paper, folding it into a cone that fits perfectly inside the chicken wire structure. Cut a drain hole in the bottom.
- Build a stick nest inside the cone with twigs, leaves, and branches. Hold the
  nesting material together by interweaving it with the slender, flexible branches
  of shrubs and trees, such as dogwood and willow. Use these branches
  to weave the nesting material firmly into the chicken wire through
  the tar paper. Place the finished cone in the crotch of a tree 4.5 to

6.5 m above ground. Use strong wire to secure the structure in place.

 The cone should be in place by fall, as owls choose nesting sites during winter.

http://cwf-fcf.org/en/resources/DIY/habitat-projects/map-your-backyard/ build-a-nesting-structure-large-owls.html

# NATUREWILD-MEIB

## Passports to Nature

Rayne and Sage (Merritt), Tivon (Victoria), Maceo (Nanaimo) Micah, Ryan and Josh (Nicomekl), Ahmed (Vancouver) all sent in their first passports. Pernilla (N. Vancouver), Rhys (S. Okanagan) and Grace (Delta Home Learners) sent in their 2nd passports and earned their NKBC caps. Anna Stol sent in her 3rd passport and Maya (Delta Home Learners) sent in her 10th passport! *Congratulations, everyone!* 

# THANK YOU to Club Leaders!

NatureKids acknowledges long service by our leaders at 7 years, 5 years and 3 years. We would like to thank the following club leaders as they achieve these markers. Seven years: Mary Forbes, Williams Lake. Five years: Maritza Matheson, Cowichan Home Learners. Three Years: Marnie Williamson, North Okanagan; Emily & Geoff Styles, Salmon Arm; Desmond Belton and Dawn Germyn, Nass Valley; Wes Wong, TriCities; Leslie Bol, Vancouver.

NatureKIDS have been busy over the summer; Nicomekl, Victoria, Merritt, Langley, Vancouver, South Okanagan, Comox Valley, Nanaimo, Ridge Meadows and Tri-City clubs all took on the **Pollinator Citizen Science Project**. **TriCities NatureKIDS** on pollinator day. Photo Credit Louise Pedersen, B.C.

Salmon Arm NatureKIDS started an `adopt-a-nest box' program. There were eleven young nature enthusiasts and their parents eager to begin monitoring of nest boxes and learning how to be citizen scientists! Many of the boxes had tree swallows nesting which was exciting to find. The club plans to meet again in the fall to help clean out the boxes.

NatureKids BC and Bird Studies Canada were co-hosts with Mosaic BC, an immigrant settlement organization, for a multicultural nature event and picnic in Burnaby and were served these delicious dishes from many countries. Photo Credit: Louise Pedersen, B.C.



South Okanagan NatureKIDS learn to recognize animal tracks. Photo Credit: Paula Rodriguez de la Vega, B.C.

Eastern Fraser Valley NatureKIDS take part in a nature poetry workshop. Photo Credit: Laurie de Jong, B.C. Your leadership is essential to the success and future of NatureKids BC!

# Why are some plants so prickly?

Plants can't run away from the herbivores (animals that eat plants) that want to eat their stems and leaves, so some armour themselves with prickly defenses. This makes them very unpleasant to eat. True **prickles** are an extension of the plant's outer layers or epidermis, while a **thorn** is a pointy piece of the plant's stem. Whether they have prickles or thorns, these BC plants are particularly hard to chew on! By: Tricia Edgar

**Oregon Grape (Mahonia aquifolium)** is often mistaken for a young English Holly tree due to its sharp poky leaves. An early nectar plant for bees, it also grows sour but edible blue-coloured berries. Photo credits: Rosemary Taylor B.C.



Prickly Pear Cactus (Opuntia fragilis) grows in dry areas of BC. It blooms in the late spring and early summer and has large, yellow flowers that turn into pear-shaped fruits. Its prickly pads look like leaves, but they are modified branches that also store water. Photo credits: Rosemary Taylor B.C.



Trailing Blackberry (*Rubus ursinus*) is a BC native (unlike its cousin the much larger Himalayan Blackberry). It tends to grow on low vines creeping along the ground, not on large bushes. Nonetheless, it has small, delicious blackberries – and tiny prickles. Photo credits: Chancelrie, CC. Nootka Rose (Rosa nutkana) is a prickly shrub with a lovely pink flower. It defends itself with sharp prickles at the base of the leaves, but it is still an important food for deer. Many animals also eat the rose hips, including birds, squirrels, and bears. Photo credits: andrey\_zharkikh, CC • hajninjah, CC



**Devil's Club (Oplopanax horridus)** is the largest of the prickly plants. It grows on long stalks in marshy areas and sides of streams in old growth forests. It has particularly large prickles. It has been honoured by local First Nations as a powerful plant with many medicinal uses. Photo credits: Daphne Solecki, B.C.

Photo credit: Prickles Background: Todd Carnahan, B.C.

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