



Blog

Algae: Pond Scum or Essential?

JULY 20, 2022 BY MONICA SEIDEL

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by Alana Coulombe

Algae occur naturally in ponds, lakes, rivers, and streams, growing in sunlight, warm temperatures, and the presence of nutrients (Watersheds Canada, 2016). Freshwater algae are unicellular microscopic plants that use photosynthesis to convert carbon dioxide, water, and sunlight into oxygen and chemical energy. Although functionally similar, algae are an evolutionarily diverse group of organisms with different classifications (Lowe & LaLiberte, 2017).

Are all algae bad? No! Although algae are sometimes referred to as “pond scum”, they play fundamentally important roles in all freshwater ecosystems. Algae are responsible for most of the photosynthesis in sun-lit streams and therefore are at the interface of the biological community and the physical-chemical environment (Lowe & LaLiberte, 2017). As the primary producers of oxygen and energy in aquatic ecosystems, algae form the base of the food web (Chapman, 2013). In addition to its use as a food source for many invertebrates, larger types of algae can also provide shelter for fish and other aquatic species (Watersheds Canada, 2016).

Algae are also essential for humans because they are at the base of the aquatic food web — from which many of our food sources arise — and provide us with air to breathe. In fact, through photosynthesis algae account for nearly half of the oxygen production on earth (Chapman, 2013)! Algae can also be utilized as water quality indicators for environmental monitoring (Lowe & LaLiberte, 2017). For example, benthic algae have short life cycles that result in a rapid response to shifts in environmental conditions (Lowe & LaLiberte, 2017). More recently, the sustainable applications of algae, including removing water pollutants, consuming carbon dioxide, producing biofuel, and its use in the pharmaceutical and agriculture industries are being investigated (Roy et al., 2022).

So how did algae get such a bad rap? Well, some algae species, though still important, can actually be very dangerous. For example, blue-green algae (or cyanobacteria) resemble bacteria and have the ability to produce potent toxins which can be harmful to humans and animals (Codd et al., 2017). An abundance of cyanobacteria can negatively impact the ecosystem biodiversity, drinking water supply, and aesthetic value and recreational use of the affected body of water due to health and safety concerns (Codd et al., 2017).



The common phrase, “too much of anything is bad”, also applies to algae! In excess, algae can trigger an algal bloom which can disrupt the natural balance of an ecosystem. During midsummer to fall when the ideal growing conditions for algae are accelerated and there is a considerable amount of nutrients present, algae can grow at a significant rate resulting in algal blooms (Watersheds Canada, 2016). Algal blooms can form a layer of “scum” on the water surface producing a distinct smell and changing the colour and clarity of the water (Watersheds Canada, 2016).

Algal blooms flourish due to a complex relationship between the physiological adaptations of the species, the environmental conditions, and interactions with coexisting organisms (Glibert & Burford, 2017). Nutrient enrichment of water, specifically by nitrates and phosphates, accelerates algae growth leading to algal blooms that may alter the water quality (Egan, 2014). Algal blooms may have harmful effects such as oxygen depletion of the water, fish toxicity, and mechanical interference with filter feeding by bivalve molluscs and fish (Glibert & Burford, 2017). The rising increase in nutrient pollution is due to numerous factors including the increase in human population, increased use of fertilizers for agriculture, higher demand for meat production leading to more animal waste, and expanding aquaculture industries (Glibert & Burford, 2017). Additionally, increased nutrient discharge has resulted from increased habitation and landscape development along the shoreline (Egan, 2014). Sewage discharge and increased storm water runoff can also contribute to the accumulation of nutrients beyond the lake’s capacity to utilize the nutrients resulting in excess algae growth (Egan, 2014).



Blue green algae in irrigation drain at Griffith, NSW. 1989.

Remember not all algae are bad! Although accelerated algae growth can lead to harmful algal blooms, naturally occurring algae are essential for life. I wonder if we should rethink the nickname “pond scum” and appreciate all that algae does for us and our freshwater ecosystems!

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Stay Natural, Stay Safe around Ticks

APRIL 2, 2022 BY MONICA SEIDEL

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by Samantha Cunningham

Ticks are a member of the arachnid family, like scorpions and spiders. They move through crawling movements only, and survive through feeding on whatever blood-flowing creatures are available, humans included.

Ticks in Canada

There are around 40 species of ticks in Canada which range in size from a pinhead to a dime. Ticks are present across Canada, living in wooded areas, tall grasses, and under leaf litter. Ticks can be present in urbanized green spaces as well as rural ones and everything in between. They become active at 4°C and above, year-round, and their [full life-cycle can last up to three years](#).

Some tick species pose health risks. The main species that can transmit Lyme disease are the black-legged tick (*Ixodes scapularis*), also called the deer tick, which is found across Canada, and the western black-legged tick (*Ixodes pacificus*) which is specific to British Columbia. However, there are other tick species that can [also transmit diseases](#).

Lyme Disease

To transmit Lyme disease to humans, the tick usually is attached for a [minimum of 24 hours](#).

Lyme disease is an infectious disease caused by *B. burgdorferi* bacteria transmitted from infected ticks to humans or animals. Symptoms typically appear 3 – 30+ days after the initial bite has occurred. For Lyme disease risks, symptoms, treatments, and more, check out the [Government of Canada's website](#). If you have been in an area known for Lyme disease and were bit or have started experiencing symptoms, go see a healthcare provider right away. Tell them where you were when you got exposed, and if applicable how long the tick was attached to you. The earlier Lyme disease is treated, the better as antibiotics given in early stages have proved more successful.

How to Remove and Dispose of the Tick

If you catch a tick attached to you [do not panic](#)! Not every tick carries a disease. Do not rip the tick off or burn it or smother it with Vaseline, as these actions will not help. Instead, use clean fine tipped-tweezers as available, or a tick pick ([like this one](#)) and [firmly grasp the tick as close to the skin as you can get](#). Gently, pull away from the skin. The goal is to get the entirety of the tick out in one attempt. If this does not happen, attempt to get the remaining tick-bits out of the skin with tweezers.

Once the tick has been removed DO NOT crush the tick between your fingers, as this is incredibly unsanitary and could be unsafe if it is an infected tick. Instead try the “contain and kill” method. For example, put the tick in a container with alcohol and encase it in tape. Before disposing of the tick, take clear, detailed photos showing it from different angles. This will help in identifying it through [public databases](#), or through various online sources like [Tick Awareness Canada](#), [CanLyme](#), or [Biological Survey of Canada](#).



Ticks and Natural Shorelines

The best method to deal with ticks is prevention. With climate change, [tick habitat is expanding](#) and changing. Since ticks can tolerate and thrive in such a wide variety of environments, it is unlikely that naturalized shorelines encourage tick habitat any more than a grassy lawn does. This sounds counter-intuitive, but some [studies have shown](#) the ability of composition and biodiversity of habitat areas to limit and regulate tick abundance. So in addition to the other benefits of natural shorelines like water filtration, erosion prevention, and providing important aquatic and terrestrial habitat, they also might be able to keep the ticks at bay (or at least not get worse)!

Tick Prevention

Ticks are inevitable when being outdoors. Here are some tips you can follow to help keep the ticks away:

- Wear closed toed shoes and tall socks. Even better, tuck your pants into the socks and your (long-sleeved) shirt into the pants.
- Use Deet or Icaridin-based bug sprays when spending time in tick habitat.
- Many people [treat](#) their outdoor shoes, camping gear, etc. to repel ticks.
- Wear light coloured clothing and gear, which helps keep you cool, [attracts fewer mosquitos](#), and makes it easier to spot any ticks.

More important than what you wear, make sure you have a plan on what you do when you take clothing off. [Tick checks](#) are critical to safety after spending time outdoors, no matter the location. Ticks can attach to your skin, clothing, shoes, gear, and most materials. It is good practice to leave as much as you can outside the home in a garage or storage area until you can check it over for tick hitchhikers. Clothing can be placed in the dryer on the highest setting for a minimum of 10 minutes to kill any ticks present. While your clothes take a tumble, consider showering. Taking a shower within 2 hours of coming indoors [has been shown to significantly reduce](#) the risk of getting Lyme disease. It washes off any loose ticks and provides a great opportunity to check out

other parts of your body where ticks prefer to hide (elbows, armpits, ears, etc.). Do not forget to check over your dog or pets that also spend time outside! Ticks and Lyme disease [are not just a threat to humans](#).

For other tick-prevention actions, stick to paths or trails both on and off your property, including to the dock or shoreline. You can better protect yourself on these paths by laying down gravel or wood chips, providing a buffer between your path and surrounding vegetation. You can also help by trimming areas along frequented pathways to prevent the risk of you brushing up against branches and brush. Ticks can also hitchhike in firewood brought from outside, so do your best to only bring it inside the house when you are ready to burn it.

Conclusion

Keeping constant vigilance is key to keeping ticks off your skin and out of your house. Prevention is easier than treatment, and when you know better you can do better! Your concerns about ticks do not have to keep you from naturalizing your shoreline or keeping up your current one. Follow the available tick prevention tips, contact our [Natural Edge Program](#) for native species planting details, and stay safe while enjoying the outdoors!

Additional Resources

1. Provincial Lyme disease information and resources: canada.ca/en/public-health/services/diseases/lyme-disease/provincial-territorial-resources.html
2. A Detailed Guide to Avoiding Ticks: halifaxtrails.ca/blog/a-detailed-guide-to-avoiding-ticks
3. You, Your Pets, and Ticks: ticktalkcanada.com

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Seed and Genetic Diversity

MARCH 7, 2022 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Samantha Cunningham

While environmental organizations often differ in purpose and mission, one thing we all agree on is the importance of native plant species. Our [Native Plant Database](#) and [Natural Edge program](#) are based on equipping landowners with tools to best naturalize their shoreline using native plants. The [Forest Gene Conservation Association](#) is another organization educating the public about native plants and the importance of genetic diversity in vegetation. Their primary focus is Ontario forests, but their principals apply almost universally. Flora and fauna require a large enough gene pool to ensure offspring have the best chance of survival. One way that nurseries, greenhouses, and growers ensure they have the best seed possible to grow their plants is by working with seed collectors.

Now I am sure you are asking yourself: what on earth is a seed collector?? Well, it is exactly what it sounds like! A seed collector is someone who goes out to healthy forest stands to gather the good seed from targeted species. Collectors then pass this seed to the people who treat, plant, and sometimes store the seed for upcoming seasons.

Recently I completed the final workshop in the Certified Seed Collector course offered by the FGCA in Southern Ontario. This course is a mix of classroom and hands-on learning about native species and their seeds. The certification is provided by Ontario's Natural Selections and utilizes *Seeds of Ontario Trees & Shrubs Field Manual for Crop Forecasting and Collecting*. This book is great to better understand everything vegetative related in Ontario, but other provinces have similar manuals as well.

Plant health starts with its seed. It is especially important to promote the health of native species as we all experience the impacts of climate change. Plants that come from a good seed stock and that are native to the area have a better chance of surviving turmoil environmental conditions. Vegetation is often the base of the food pyramid for animals, so by supporting native species you are helping to buffer your area from the effects of climate variations.

As a property owner you can help contribute to native species and their genetic diversity through your garden. By choosing plants that are native to your eco-zone, you are helping to support all of the other local species, both plants and animals. When choosing your plants for the season, go to local nurseries, greenhouses, and growers to support local business and local genetic diversity for your native species!



This blog post is part of an education and engagement series that is generously funded by the RBC Foundation through RBC Tech for Nature, a global, multi-year commitment to support new ideas, technologies, and partnerships to address our most complex environmental challenges. To learn more about Watersheds Canada's project that is funded through RBC Tech for Nature, please read this [media release](#).

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Get to Know your Pollinators

FEBRUARY 28, 2022 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Samantha Cunningham

We often talk a lot about pollinators as a general grouping of insects we see in our gardens and hear about on the news. Recently, there are major concerns about the health of honeybee populations in North America and [how a decline in pollinators has many severe implications](#). Aside from honeybees, there are about 800 other species of bees in Canada, and as well as countless other species of butterflies, moths, beetles, and hummingbirds that are considered pollinators. Today we want to get to know some of Canada's lesser-known pollinators!

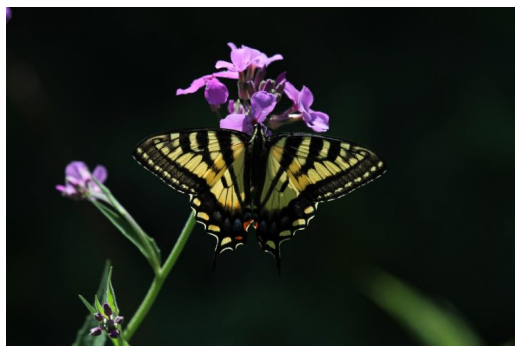
But first, an important side note. Bats are a critically important pollinator in North America, but [not present in Canada](#) as a pollinator. Supporting [Canadian bat species is still important](#) to maintaining a well balanced ecosystem. However, if you like [tequila or mizcal](#), you should especially care about bats as pollinators in other countries!

Bees

As bees are the most common and important pollinator (with over 800 species in Canada), let us get to know a native species found across Canada. The [Mining Bee](#) does indeed mine, or burrow, into the ground to make a nest and raise its young. These bees are only active in the springtime, which is why historically they were believed to be the [original primary pollinator of native fruit trees](#) and other food sources. Typically, they are a [fuzzy rust colour](#), and they are docile with their sting being too weak to penetrate human skin. In addition to being an important pollinator, these bees also help to [aerate the soil](#) through their nesting activities.

Butterfly

The Canadian Tiger Swallowtail present from the bottom tip of Ontario, across the country, and up past the Arctic circle. You can often find males [huddled around puddles](#) to get nutrients and water. They are a very common, and beautiful, pollinator species found in Canada. With a [wingspan of up to 8cm](#) they have a large wingspan to transport pollen! Swallowtail presence in your garden can also help to [deter predators](#) like birds and lizards.



Bird

Ruby-Throated Hummingbird is another species spread across virtually all Canadian provinces. Its presence is only in the warm months as these hummingbirds spend the winters in Central America. It has been proven that these hummingbirds fly the 800km over the Gulf of Mexico in a day and they [do not hitchhike on the backs](#) of other birds as previously thought! Another curious feature of these cool little creatures is their ability to [remember the placement of food sources](#) from the previous summer. If you are looking to attract some hummingbirds to your property, pick tubular shaped flowers, or use a [hummingbird feeder](#) and keep it in the same area of your property year to year. Make sure to keep the food source away from windows, and keep the space dedicated to hummingbirds and not near other bird feeders or food sources. This is because hummingbirds are very [defensive over their food!](#) Make sure to [regularly clean](#) your hummingbird feeder, too. While being beautiful and a great pollinator, ruby-throated hummingbirds also [consume smaller insects](#) like spiders and aphids, making them a great defence for your garden.



Male Ruby-throated Hummingbird (Simon Lunn).

There are over [1,000 species of pollinators](#) in Canada that support our agricultural industries and who are critical for general ecosystem health. Not only do these species complete the important task of pollination, they also fill other ecological niches in their environments. Supporting pollinators is a key component of promoting a well-balanced ecosystem on your property and beyond!

Pollinators are primarily [threatened by habitat loss and degradation, and pesticide use](#). As individuals, we can all do our part by avoiding the usage of harsh lawn chemicals and by planting native flowering plants wherever possible. A great place to start to naturalize your shoreline property is our [Natural Edge Program](#), including the [Wildflower Garden Guide](#), and [Native Plant Database](#) where you can see what native plant species are best suited for your eco-zone. Whether you create a designated pollinator garden or just add some wildflowers among your normal plants, every little bit helps to support these important creatures.

For everything pollinator-related, be sure to check out the [Pollinator Partnership](#).



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Top 5 Ways to Support Winter Wildlife

FEBRUARY 12, 2022 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Samantha Cunningham

Winter in Canada officially lasts a total of 4 months, although sometimes it can feel much longer! This season can be a difficult one, especially for wildlife. Canadian species have either evolved to migrate to warmer climates, hibernate, or adapt to these seasonal changes. Some of [these adaptations include](#) hibernation, storage food, physical changes, and other location dependent characteristics. The increased development of natural areas has placed stress on species throughout the year but particularly in the wintertime. The silver lining is that there are things you can do to help support your shoreline wildlife this winter.

1. Support Native Plants!

Prioritizing native species on your property has [year-round benefits](#). Native plants are more suited to Canadian climates meaning they are typically more winter hardy, and often fill an ecological niche throughout each season. For example, [black chokeberry](#) (pictured below) blooms lovely flowers in early spring that support pollinators, provides cover and edible greenery during the summer, then grows edible berries in the fall that last throughout the winter. Even native plants that do not act as a direct food source will provide valuable habitat and help [diversify the landscape](#). If you have specific animals you want to support or see, you can [look up native plants](#) they frequent and plant those species next growing season!



2. Naturalize your Shoreline!

A [naturalized shoreline](#) not only provides valuable habitat for animals year-round, but it can also provide benefits such as soil stabilization, flood mitigation, and climate control. It has been shown that some freshwater fish species [prefer the near-shore area during the wintertime](#), especially if the area has [overhanging vegetation present](#). As well, leaving areas of [woody debris](#), large cobbles, or other such natural features is beneficial in supporting both aquatic and terrestrial species. The [Natural Edge Program](#) can help support you in planning and planting your shoreline with your choice of native vegetation!

3. Limit your disturbance

The best way to limit your impact on the shoreline is to create pathways through your property and stick to them. This can be beneficial year-round, but especially impactful in the wintertime. Many terrestrial creatures take shelter in and under snow piles, typically at the interface between the snow and earth. Try to avoid near-shore activities that disturb the water under the ice. In winter, terrestrial or aquatic animals have metabolic limitations and finite food supplies. It is important that they [limit their movement](#) to preserve energy and not increase their risk of predation. There are options and opportunities to create or help enhance winter habitat, like [restoring in-water structures](#) for local fish species (pictured below).



4. Start planning for spring!

Nothing helps beat the winter blues quite like planning next season's gardens. Winter is a good time to look into local programs, like [Love Your Lake](#) and the [Natural Edge Program](#). You can also check out your local Conservation Authority or Lake Association for additional programs. If you are more of a do-it-yourself type person, check out the [Native Plant Database](#) to find native species for your eco-zone.

If you are planning to do major work along your shoreline or in the surrounding areas, look into environmental guidelines and local by-laws for any potential permits needed. This is especially important if you are doing any in-water work as spawning times of fish should be considered. Finally, winter is a great time to look back into your maintenance records and see if any upkeep is required. If you have a septic tank, when was the last time the honey-wagon paid a visit? If you have eavestroughs, do they need to be cleared out? Often, it is good to book these services ahead of time as they can book up quickly right when you need them.

5. Winterize your chemicals.

Any chemical compound, especially in liquid form, [should be stored](#) year-round in a cool, dry, well-ventilated place, away from heat sources, and in an area that is not susceptible to flooding. This can be in a garage or shed outside the home that is well set-back from your shoreline. It is important to store all materials according to the manufacturer's instructions. This is because many commonly used chemicals can freeze, expand, break their container, or leak if they are not stored correctly. These chemical spills pose a threat to human health and environmental health. The accidental leaching of chemicals into the surrounding environment or the cleaning of spilled chemicals can often lead to harmful contaminants entering the local watershed. Proper storage is also important to ensure the product is usable post-winter. For example, freezing will ruin many types of paint and alter the colour of the product, which would be a nasty surprise when you want to use it in the spring! Do not wait for winter to hit to store your fertilizers, pesticides, paints, and gasoline. Many of these common chemicals have a freezing point above 0°C. The best thing to do is to read the instructions on the label or look up the specific Material Safety Data Sheet (MSDS) online.

Winter can be a tough time out in the natural world, but by following these five simple tips and tricks, you can make a positive impact on your local ecosystems. Summer might seem like a long way away, but it is never too early to reach out to start planning for better weather. Watersheds Canada has many different [programs](#), partnerships, and [free resources](#) that are available to help you support your shoreline health.



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Know, and love, your lake!

NOVEMBER 2, 2021 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Mario Garavito

In its simple definition, a lake is a body of water that is surrounded by land. A lake can be found in every continent around the world, varying greatly in size and in depth. It could be small enough to fit in your backyard – like a pond – or so big that it is known as sea – the Caspian Sea is the world's largest inland lake, measuring over 371,000 km² in size!

Canada is exceptionally fortunate when it comes to lakes. According to different studies, our country is home to the largest number of lakes in the world, with about 7.6% of Canada's nearly 10 million km² being covered by freshwater. Therefore, despite an apparent abundance, the freshwater resource must be managed carefully. We have a responsibility of protecting these important bodies of water!



Lake-side adventures (photo: Mario Garavito).

Why are lakes important?

Lakes are ecosystems: areas where biological energy flows through a food chain that is used by many different types of organisms like birds, mammals, plants, and insects. In other words, a lake is a community where living organisms live and interact. Its health is vital for maintaining the equilibrium, or balance, of the whole system.

Did you know: Some scientists believe the first living organisms on Earth developed in lakes?

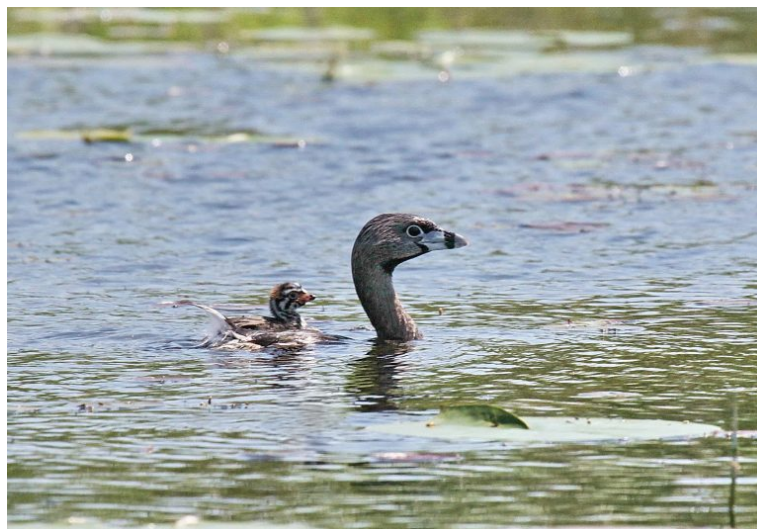
Likewise, lakes are important in preserving and maintaining wildlife populations. These freshwater areas serve as migration stops and breeding grounds for many birds and as refuges for a wide variety of other animals. For people, lakes are valuable resources in a variety of ways. For example:

- Farmers use lake water to irrigate crops;
- Lakes supply many communities with water; and,
- Because they are often very beautiful, lakes are popular recreation and vacation spots, and, for some fortunate ones, their permanent homes.

Is my lake healthy?

We are completely sure that if you are reading this article, you care about Canada's lakes. Because of that, you probably wonder if the lake where you live or which you constantly visit is in good health. The answer is not as simple, as not all lakes are alike, but there are some common aspects that can help to make a first evaluation:

- **Healthy characteristics:**
 - **Life!** If you see fish and plants, it is a good sign;
 - **Turbidity:** the less, the better;
 - **Wildlife:** have you seen deer or other animals drinking water from the lake?
 - **Water circulation:** allows oxygen to be spread throughout the lake and is an essential part of keeping the lake alive.



Pied-billed Grebe with baby (photo: Simon Lunn).

- **UNhealthy aspects:**
 - **Eutrophication:** when a lake gets too many nutrients, it causes blue-green algae growth;

- **Blue-green algae** (cyanobacteria): It stays on the surface of the water and forms a sort of mat. When the conditions are just right, the algae multiply quickly. This is called an algal bloom and is harmful to lakes, animals, plants, and people; and
- **Invasive species**: can change the natural habitat of the lake and are known as biological pollutants when this happens.



Algae bloom (photo: Barbara King).

What can I do for my lake?

There are many actions that you can take to protect and take care of your lake. At Watersheds Canada, we have been working all over the country alongside local community groups and individuals with the mission to protect and restore freshwater. One of them is **Love Your Lake**, a shoreline evaluation and stewardship program that provides individuals with a property specific report outlining voluntary actions that can improve the health of your lake and shoreline property.

The Love Your Lake Program has successfully assessed more than 150 lakes across Canada which includes almost 40,000 shoreline properties. You can learn more about the Program at loveyourlake.ca

Also, we would love to know which is your favourite lake in Canada and what you are doing to protect it. We invite you to write it in the comments and share this article with some friends or family that **love the lakes as much as you**. You can also fill in this short survey to let us know what you love about your lake: loveyourlake.ca/survey

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Using Benthic Macro-invertebrates as a Way to Assess Aquatic Pollution Levels

AUGUST 24, 2021 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Ian Grist

If you are a property owner with a river, creek, or stream nearby, you may be concerned or curious about the health and pollution levels in the water. There are ways you can find out the contaminate levels present in your water by what aquatic organisms you observe. In particular, benthic macro-invertebrates are excellent bio-indicators of freshwater health. Macro-invertebrates do not have a backbone and are visible to the naked eye. They live on the bottom of a water body, often in the substrate. Since they spend large parts of their lifecycle in the water, they are very sensitive to different levels of pollution they encounter over their lifetime.

Researchers use macro-invertebrates as bio-indicators, or “living indicators”, because of their short life-cycle, the fact that they are all genetically similar, and because of their sensitivity to a broad range of contaminants and pollution. In each aquatic ecosystem, there are tons of different macro-invertebrate species present and every species has different tolerance levels to pollution. For example, *Daphnia sp.* (pictured below), also known as water flea, is very sensitive to contaminants. Finding these species in your stream is a good sign of a healthy ecosystem. The presence or absence of zooplankton is also a good indicator of a polluted stream or river.



Some of the low tolerance macro-invertebrates include caddisflies, dragonflies, water pennies, stoneflies, and mayflies. Finding these means the ecosystem is healthy. If, however, you only find any black flies, aquatic worms, or midges, this may indicate your stream or river is contaminated as these species are all tolerant to higher levels of pollution.

I encourage you next time you are out on the water to bring a net and some small containers to see what species of benthic macro-invertebrates are in your local stream or river. Not only will you discover a bit more about the health of your local aquatic ecosystem, but you can also submit your findings to an online citizen science platform like [iNaturalist](#). Happy adventuring!

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Blog

Happy World Snake Day!

JULY 16, 2021 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Samantha Cunningham

While we think of snakes primarily as predators, they are both predators and prey! This makes them a key component of a healthy, balanced ecosystem. These slithery serpents help keep pest populations under control by eating insects, rodents, and small mammals. They are nature's pest control and they are particularly good at protecting gardens from slugs and other nuisances! Snakes are also preyed upon by birds and larger mammals.

Fun Fact: Snakes, while typically thought of as solitary animals have been shown to develop and enjoy companionship with other serpents of the same species!

Source: Pennisi, 2020.

The most common and widely distributed snake in Canada is the harmless Garter snake. There are six types of Garter snake which can be found across the country from coast-to-coast and even up into the Northwest Territories. Including the Garter snake, there are 25 different snake species in Canada. Exterminating snakes is prohibited due to their minimal risk to humans and large ecological benefits. Some species are also listed as Species at Risk in Canada and individual provinces.



Garter snake. Photo: Monica Seidel.

According to the Canadian Wildlife Federation, there are currently only three species of venomous snakes in all of Canada. All three are registered Species at Risk. The first species is the Western Rattlesnake which has a small population in British Columbia in the Okanagan region. The second is the Prairie Rattlesnake which is found in southern Saskatchewan and Alberta. The final one is the Eastern Massasauga which is only found in central and southern Ontario.

The greatest threat to all snake species is humans. From habitat development to road mortality to targeted persecution by people, these snakes have much more to fear from us than we do them. In fact, snakes tend to be very avoidant of humans and will give warnings before defending themselves when cornered or threatened. What is far more likely to happen is for a startled snake to disappear in the blink of an eye to get away from you! If you get to see a snake sitting still, you can use Apps such as [SnakeSnap](#) and [iNaturalist](#) to help identify snakes from photographs in real-time! You will most likely see them sunning themselves on a rock, so keep your distance, use your camera's zoom, and learn something new!



Did you know? You are more likely to be hit by lightning than bit by a snake in Canada! There are less than a dozen snake bites reported each year.

Source: Cottage Life, 2018.

Smooth Green Snake. Photo: Simon Lunn.

There are many things you can do to stay safe around snakes, venomous or not! The first and best rule is to leave the snake alone. If you come across one, especially if venomous, stop and back away slowly. Do not approach or try to handle or touch them. Most

snakes do not want to see people and will leave or hide when confronted. Here are some other ways the Canadian Wildlife Federation suggests to keep some distance between you and our serpent friends:

- Wear long pants and closed-toed shoes when walking in rocky areas or long grasses (also good for tick protection);
- Have a light when walking at night;
- Do not stick your hands where you can't see. Shine a light, use sticks or other materials to check under plants or rocks, or better yet, leave it be; and
- Keep your pets on a leash and on the trail.

If you ever find yourself threatened by one of these venomous snakes contact your local provincial wildlife department to intervene.

The best policy to co-exist with these important creatures is to mutually ignore each other. Leaving areas natural or reintroducing naturalized areas to your property can help encourage snakes to remain in that habitat and away from other areas of your property. Check out the free [Natural Edge Native Plant Database](#) for more information about suitable native plant species for any eco-zone found in Canada.

While not all of us have pleasant relationships with snakes, it is important to remember co-existing provides numerous benefits for humans and snakes alike.

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Blog

The Problem with Plastics

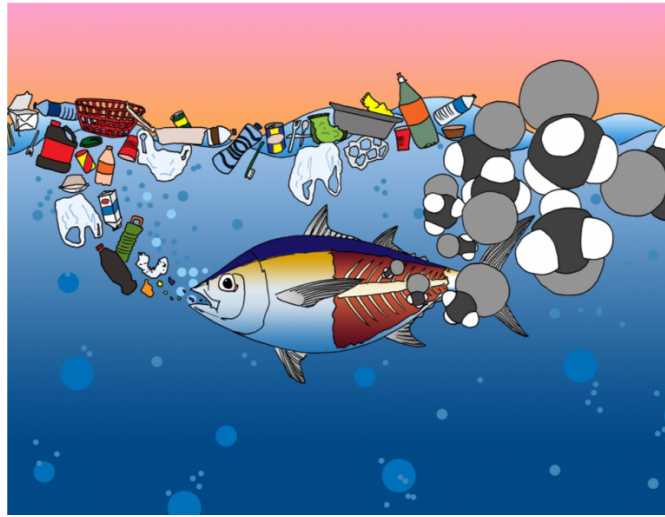
JULY 6, 2021 BY MONICA SEIDEL

1 COMMENT

by Nathaniel Holloway

Plastic has become central to the way humans package, ship, and consume products. This includes everything from electronics, to medications, to baby toys. Plastic was—and still is in some contexts—considered a miracle product which is waterproof, hard-wearing, and easily malleable. However, we have allowed this material with a myriad of unknown adverse health effects to accumulate in Earth's oceans. While it may seem like an “out of sight, out of mind” scenario, it most certainly is not.

Plastic in the open ocean does not stay in its original size or shape; it is rendered frail due to photo-degradation by the sun's rays and is subsequently fractured into smaller and smaller pieces by the constant battering of waves. These tiny bits of plastic are ingested by all surrounding animals. Many of the predators—humans included—then eat the fish that have themselves accumulated plastic and the harmful chemicals found within. The plastics do not disappear — they accumulate. As such, our collective neglect for the natural habitats of wildlife has a direct impact on our own health and wellbeing. Furthermore, poisoning animals in an ocean reduces the biodiversity of an area and can cause a ripple-effect which collapses the food-chain, rendering an entire ecosystem—plants included—unstable.



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As pervasive as plastics have become, they can be limited in part through personal choices. Shopping in a store which allows you to purchase bulk goods in your own containers can save countless bags from joining the already mounting piles of garbage in landfills and in the oceans. Utilizing reusable bags when shopping, choosing plastic-free alternatives, and shopping local all also reduce one's plastic consumption. Another tactic to reduce plastic consumption is to rethink whether or not you truly need a new product—whether it is eyeing new clothing when you have unworn pieces at home, or buying a packaged granola bar when you could make one yourself at home.

Perfection is not essential to reduce waste. As I've heard said by zero waste chef Anne-Marie Bonneau, "We don't need a handful of people doing zero waste perfectly. We need millions of people doing it imperfectly". You should not try to cut all plastic from your consumption overnight as this may be stressful, draining, and discouraging. As the old saying goes, *slow and steady wins the race*, and this holds true for the zero-waste movement, too. You may try changing a few plastic-wrapped products you typically purchase to a glass, metal, paper or wood alternative. Every time you shop or eat out from that point on, you will be equipped with new plastic-free substitutes for your needs. This will eventually drastically lessen your personal single-use plastic consumption.

Creating waste can be a source of stress and can impact how we see ourselves when we aspire to completely stop our consumption of plastics. As such, it is important to understand that creating waste is a part of living and—by extension—being human. In fact, I will be the first to say that though I am no fan of plastic, I would be less inclined to trust medication which was not given to me in a sealed and sterilized plastic bottle, for example. The goal is to look for products which do not necessitate the use of plastic—such as clothing, tools and various food items—instead of obsessing over what necessitates plastic.

Here are some resources if you are interested in learning more about single-use plastics:

1. Great Canadian Shoreline Cleanup: <https://shorelinecleanup.ca/>
2. Plastic Oceans Canada: <https://plasticoceans.ca/>
3. Oceana's Plastic Pollution campaign: <https://oceana.ca/en/our-campaigns/plastics/campaign>
4. Canadian Wildlife Federation's plastics reduction petition: <https://cwf-fcf.org/en/explore/do-more/petitions/plastic-petition.html>



Blog

Pollinator Champion Feature – Alan and Joyce

JULY 23, 2020 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

After retiring and moving to the countryside seven years ago, Alan and Joyce are enjoying the peace and quiet of life on the water. Having both grown up going to cottages for vacation, they now are able to spend more time in nature and enjoy the panoramic views with little evidence of people around. “Natural shorelines are important to us because it draws in more nature – plants and animals – to our property. We enjoy looking around and seeing and living beside the natural shoreline”, said Alan, a participant in the Natural Edge Program from Watersheds Canada.

The Natural Edge Program

The Natural Edge Program works with waterfront property owners to restore their shoreline by planting native trees, shrubs, and wildflowers. Each landowner receives a full-service restoration program, which includes a free site visit, and the creation of a shoreline restoration plan for their property using Watersheds Canada’s self-developed App. Each customized plan provides detailed descriptions of native trees, shrubs, and wildflowers suitable for planting based on their site conditions and preferences.

Compartment A

Naturalization Area

PH: normal
 DEPTH: potted, bareroot
 MOISTURE: normal, moist
 SOIL TYPE: sandy, loamy
 LIGHT CONDITIONS: partial sun



- | | |
|---|---|
| ● 1 Silver Maple | ● 4 Nannyberry |
| ● 3 Red Pine | ● 6 Staghorn Sumac |
| ● 8 Red Osier Dogwood | |



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Alan and Joyce's custom planting plan was created using the Natural Edge App. Landowners walk their property with trained Natural Edge staff to pick appropriate tree, shrub, and wildflower species based on light and soil conditions, and aesthetic and height preferences.

By planting, Alan and Joyce are helping to improve their lake's water quality as native plants filter excess nutrients and toxins out of water run-off. Vegetated shorelines also stabilize the shore and reduce soil erosion as plant roots hold soil in place, a problem that their lake has been susceptible to: "we'd rather have erosion control that is natural, rather than human-made", said Alan. "In recent years we've lost four trees along the shoreline that have come down due to erosion".

Welcoming Pollinators to the Property

An additional benefit to participating in the Natural Edge Program is the anticipated increased presence of pollinators to the property. Wildflower species like Butterfly Milkweed, New England Aster, Black-Eyed Susan, and Wild Bergamot, and shrub species like Red-Osier Dogwood, Bush Honeysuckle, Chokecherry, Canadian Serviceberry, and Snowberry were all planted along their shoreline property to provide pollinators like bees and butterflies with food and habitat. While they "do see some hummingbirds, a few butterflies, and very few bees" on their property, they would like to see more! By taking action on their property and planting local plant species, pollinators will be welcome and will continue to support "an environment that takes care of reproducing itself and doesn't rely on human input", said Alan.

These insects and animals play a critical role in natural ecosystems and in human food production. For example, butterfly species are beautiful, but they also provide an incredible service to the planet. As pollinators, they move pollen from one plant to another, which allows the plant to become fertilized. Pollinators fertilize fruit-producing plants like blueberries, strawberries and pumpkins.

Why Participate in the Natural Edge?

What was Alan and Joyce’s experience with the Natural Edge Program and staff? “Our contacts have been very professional, proactive, and flexible. The staff are excellent communicators and clearly know their science and understand how to apply it. Since we did not have the expertise to do the job, we couldn’t have done it without the Natural Edge Program – it’s a great program!”

About Watersheds Canada

Watersheds Canada is a non-profit organization committed to providing programs across the county that work to engage and help shoreline property owners, lake associations, and community groups enhance and protect the health of lakes, rivers, and shorelines. Despite their big name, Watersheds Canada is a very small charity based in Perth, Ontario that raises every dollar each year from donations, grants, and foundation support as they do not receive any yearly support from government funding. What has always set Watersheds Canada apart is their dedication to the local communities: by taking the time to listen to the communities’ local needs, programming is always specific, impactful, and as efficient as possible.

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Blog

Happy Earth Day! 3 Free and Easy Ways to Create Wildlife Habitat

APRIL 22, 2020 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

Many of our native wildlife populations are declining due to urban development and the removal of natural habitat features. However, there are many ways that landowners can preserve and create habitat on their property so that we can co-exist with these species. Celebrate Earth Day by protecting sensitive shoreline habitats and the wildlife that live there.

In many cases, creating wildlife habitat is as easy as doing nothing! Allowing vegetation to grow naturally to create “no mow” areas, leaving aquatic and terrestrial logs in place, or removing leaf litter are all examples of how you can preserve wildlife habitat by doing nothing.



Create a “No Mow” Zone

Creating a “no mow” zone can be a good way for shoreline landowners to start adding wildlife habitat to their property. Manicured, mowed lawns that are missing natural features like trees, logs, or leaves create a very poor habitat because there is no shelter or food sources available. One exception is Canadian Geese who are known to be attracted to mowed lawns along the water because they prefer open visibility and easy access to spot and escape from predators.

Leave Aquatic Logs

Fallen trees and woody debris that settle along your shoreline, partially or fully in the water, provide crucial habitat for fish, birds, and reptiles like turtles. Fish use woody debris as a shelter from predators, a place to lay their eggs, and to find invertebrates to eat. Turtles need these habitat features to bask in the sun because as reptiles, they receive energy from the sun’s warm temperatures. Waterfowl like ducks and herons use partially emerged logs as resting spots, as well as a place to look for food.

Leave Terrestrial Logs and Leaf Litter

Terrestrial logs, old stumps, fallen branches, woody debris, and leaf litter are essential habitat for small mammals, birds, toads, salamanders, and an abundance of insects. As the log rots, reptiles and amphibians lay their eggs in the moist wood. A decaying log is home to many insects like beetles and ants that burrow under the bark. These insects provide valuable and nutritious food for many other wildlife species. Additionally, these structures provide valuable shelter and protection from predators. In the fall, the leaves that drop off nearby trees add insulation and shelter before the winter as well as adding decaying organic matter and nutrients to the soil.



Wildlife like fish, birds, mammals, amphibians, and reptiles are the citizens of the natural world. They maintain the environment through actions like pollination and nutrient cycling while also amazing us with their natural beauty. Using these simple and free methods, you can help protect critical habitat areas and food sources on your property for wildlife for years to come.

To learn more about creating shoreline habitat on your property, visit <http://naturaledge.watersheds.ca>

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Blog

Meet Your Butterfly Neighbours

MARCH 12, 2020 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

By Monica Seidel

Did you know that there are over 300 butterfly species in Canada, with [150 in Ontario alone](#)? While most people are familiar with the iconic monarch and swallowtail butterflies, there are many other species fluttering around that would love to meet you.

Great spangled fritillary

You may have seen this butterfly on a large native plant, like milkweed or spotted Joe-Pye weed. Great spangled fritillaries are found from British Columbia to Nova Scotia, living in marshes, damp meadows, clearings and sometimes along roadsides. They are very active and have wingspans up to 88 millimetres wide! Caterpillars crawl under leaves to hibernate soon after hatching over the fall and awake in the spring to feed on violets. Since fritillary species are very similar to each other, they must rely on pheromones and smell to find a mate of their own species.



Question mark

This is the largest butterfly in the angelwing family and has a wingspan of 45 to 68 millimetres. They are easily recognized by their distinctive wing shape, brown-orange colour and silver question mark shape found on their underside. They can be found in woodlands or urban areas, looking for animal droppings or sap from trees and rotting fruit to eat. This butterfly is thought to migrate to the U.S. for the winter and breed in Canada during the summer, though their migration is not well known.



White admiral

Adult white admirals are usually seen in June and July in Canada in upland hardwood forests, clearings and barnyards, as they are attracted to the strong smell and moisture in

poop! White admirals drink nectar from flowers and sap from rotting plants and have a wingspan of 50 to 80 millimetres. The caterpillars feed on willow, aspen and poplar, and other subspecies feed on birch, cherry and oak trees.



More than meets the eye

Butterflies are beautiful, but they also provide an incredible service to the planet. As pollinators, they move pollen from one plant to another, which allows the plant to become fertilized. Pollinators fertilize fruit-producing plants like blueberries, strawberries and pumpkins.

Threats

[Butterflies' critical food sources and habitat are impacted by heavy herbicide and pesticide use.](#) Caterpillars often feed on one species of plant, which may be considered a "pest" or an unattractive species that people then mow or pull.

Another threat to butterflies, as with many wildlife species, is habitat loss and fragmentation. As human development replaces natural areas, butterflies are forced to ditches and roadsides where lack of appropriate habitat threatens the viability of caterpillars, and adults are often struck by oncoming traffic. Since butterflies migrate far distances, having suitable habitat across their entire range is not always easy.

How can I help?

You can help butterflies by providing water for them to drink from and bathe in. Natural areas with uncut grass, thistles and milkweed provide food and habitat. Leaf litter and tree debris on your property can provide a hibernation site for caterpillars. You can also plant a butterfly garden that features gorgeous native trees, shrubs and wildflowers.

Make sure to report your sightings to a database like [eButterfly](#), [Journey North](#) or [iNaturalist](#). By doing so, you will contribute to conservation research, meet other butterfly enthusiasts and grow your knowledge of local species.

This article was originally submitted as a [guest blog contribution](#) to the Nature Conservancy of Canada's Landlines blog.



Blog

Canada Prepares to Ban Single-Use Plastics

AUGUST 8, 2019 BY MONICA SEIDEL

[LEAVE A COMMENT](#)

by Abbey Unsworth, Summer Student – Natural Edge and Love Your Lake

Canada has recently announced a ban on single-use plastics as part of a strategy to combat plastic pollution. The ban is set to take effect by 2021 and will most likely include items such as plastic bags, straws, cutlery, and take-out containers, but the specifics have not yet been determined. The strategy also focuses on companies that manufacture or sell plastic products, putting a responsibility on them for the management and recycling of their plastic waste. Fishing industries will also be included in the strategy with efforts focused on preventing and retrieving discarded fishing gear, known as ghost gear, which contributes to ocean plastic pollution and endangers wildlife (Pope, 2019).

Plastic pollution is a mounting global issue. In Canada, 3.2 million tonnes of plastic waste is produced each year, and only 9 percent of this is recycled. The rest is thrown away, overwhelming landfills and littering our streets, parks, and watersheds. The most commonly found items that are littering North America's coastline are food wrappers, bottle caps, beverage bottles, plastic bags, straws, and stir sticks ("Environmental Impact," 2019). Plastic is not biodegradable and it is widely used for its durability and cheap production costs which causes its persistence in the environment.

While this government ban is a step in the right direction in the fight against plastic pollution, as consumers we need to help by working to reduce our own plastic footprint. There are many simple ways which we can all participate, such as:

- Bringing a refillable water bottle or travel mug for coffee
- Request no straw when ordering drinks, and bring your own reusable straw made from metal or bamboo
- Avoid plastic stir sticks and using a metal spoon instead
- Bring your own reusable cutlery when grabbing lunch on-the-go
- Buy in bulk using reusable containers where possible
- Shop with reusable bags instead of single-use plastic ones
- Look for products that use less plastic in their packaging
- Switch to reusable beeswax or cheesecloth instead of plastic wrap
- Use reusable containers rather than plastic baggies
- Donate or trade unwanted clothing
- Learn proper recycling techniques

When learning about how to reduce your impact, don't get overwhelmed. The world doesn't need a few people doing this perfectly, it needs everyone trying to help imperfectly. Every change counts.

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Blog

The Many Health Benefits of Nature

APRIL 28, 2017 BY JORDEN KEELEY

2 COMMENTS

Written by: Chl e Lajoie, 2017

Spring is here! That means that it's time to start spending more of your days outdoors. Have you ever noticed how you feel better, both mentally and physically, when you spend some time in nature? There's a reason for that: there are many health benefits related to being outside.



Vitamin D

Vitamin D is an essential vitamin that your body requires to function properly; without it, you're at risk of muscle weakness, increased blood pressure, cardiovascular disease, autoimmune disorders, and even cancer. Vitamin D is unique because its main natural source is the sun. In order to get your daily dose of vitamin D, it is recommended to get 10-30 mins of sun exposure. Spending this short amount of time in the sun is well worth it!

Mental Health

Being outdoors has a number of positive effects on your mental health. It aids in lowering depression, reducing stress, and increasing your focus.

With current increases in depression and anxiety related illnesses, studies show that simply walking outside in nature can reduce stress and increase positivity which, in turn, reduces feelings of depression. Vitamin D, which we know comes from the sun, has been linked to depression levels; low vitamin D levels = a higher chance of depression. So get outside on your lunch break to give yourself a mental boost for the afternoon.

Eye Health

Myopia, more commonly known as nearsightedness, is a refractive error of the eye which causes one to have trouble seeing objects in the distance. It's marked by having difficulty seeing road signs or reading from a chalkboard; however, reading objects up close, such as a computer screen or book, is perfectly clear. Doctors feel it is partly the result of increased computer and TV time and according to a study by the National Eye Institute, myopia has increased from 25% to 41.6% between 1971 and 2004.

Being outside gives your eyes a rest from the strain of looking at a computer or watching television, so remember to take breaks at work and head outside to help keep your eyes healthy.



Air Quality – Clean Air

After being stuck inside all day, there's nothing better than a breath of fresh air! It seems to give you that extra boost of energy just when you need it, and there's a reason for that. Simply put, there is a higher concentration of pollutants present in indoor air compared to outdoor air, largely due to poor ventilation.

Outdoor air contains fewer pollutants since gases and particulate matter are diluted due to the larger area they have to spread out. In addition, trees, shrubs and other vegetation provide clean air through absorption of gases and deposition of particulates onto leaves. Air pollutants such as gases (ozone, and oxides of both nitrogen and sulfur) and particulate matter can have negative effects on our health.

They can affect our respiratory systems by causing asthma, bronchitis, and emphysema. Therefore, it's best to spend as much time as you can outside to reduce the amount of pollutants you breathe in.

Exercise

It's common knowledge that eating healthy plus exercising regularly improves our overall health. A great way to accomplish this is by getting outdoors. It's easier to exercise when you step outside. Whether it's walking, hiking, kayaking, biking, or swimming you are exerting some form of energy. Furthermore, a study published in 2013 in *Extreme Physiology and Medicine* concluded that exercising outdoors is more effective than exercising indoors as you will increase your physical activity levels without realizing the amount of energy exerted. Exercising outdoors involves terrain challenges which you don't perceive to be as hard and tiring as when you increase the resistance or speed on a cardio machine.

So take the time to get out and enjoy nature with all the benefits it has to offer!!

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Roy | September 27, 2017 3:19 am

amazing post with great info

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Junayedseo | August 1, 2017 5:52 am

Nice information, valuable and excellent design, as share good stuff with good ideas and concepts, lots of great information and inspiration, both of which I need, thanks to offer such a helpful information here

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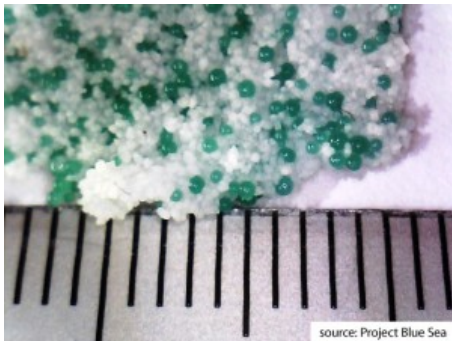
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Blog

Microbeads – Not a Very Tiny Piece of Jewellery

JANUARY 29, 2016 BY MELISSA DAKERS

1 COMMENT



Written By: Brent MacDougall

In today's realm of environmental awareness, the majority of citizens would be unlikely to discard plastic directly into our fresh and oceanic water systems. However, unknowingly ordinarily environmentally conscious individuals may be polluting our water systems through washing their face, brushing their teeth or scrubbing their body. The reason individuals may be performing an act of pollution is due to one word, "*microbeads*"!

Now, you may ask what is a microbead? Although, definitions and measurement techniques may vary, microbeads are defined by Environment Canada as "[Synthetic polymer particles that, at the time of their manufacture, are greater than 0.1 \$\mu\text{m}\$ and less than or equal to 5 mm in size which can vary in chemical composition, size, density and function](#)" (Environment Canada, 2015). Microbeads have been manufactured for a variety of purposes including; for use in personal care products, cleaning products, printer toners, as abrasive material in plastic blasting, for use in anti-slip plastic products, as well as for industrial applications (e.g. oil and gas exploration, textile printing, and automotive molding).

One may ask if microbeads are so small, how are they having such a large impact on our aquatic environment? Well, to begin, it is precisely due to their extremely small size that microbeads are having such a large and *currently* irreversible impact on our ecosystems. Due to their small size, a portion of microbeads from "down the drain" products are likely to enter the environment even with the most advanced wastewater treatment procedures. You may have noticed I compared microplastics to microbeads, although technically different and with definitions varying based on size limits, in either case it is safe to think of extremely tiny pieces of plastic. Within the environment it is almost impossible to distinguish between microbeads and secondary microplastics. Most studies currently only focus on total microplastic concentrations, therefore calculating the contribution of solely microbeads versus other small plastic litter is not possible. One study on microbead contribution to plastic litter has conservatively estimated that the use of microbeads in **only liquid soap** resulted in the emission of 263 tonnes per year of polyethylene microbeads in the United States (Gouin *et al.*, 2011)

Microplastics have been measured throughout Canada and the World, including in waters, sediments, soils, deep sea sediment deposits and ice cores. The effects of microbeads and microplastics on organisms and the environment can be summarized in three categories from scientific literature;

- Physical Effects (Blockages and external/internal attachment in organisms)
- Residual Chemical Effects (Chemicals present during microbead synthesis)
- Absorbed Pollutant Effects (Persistent Organic Pollutants, Pesticide, etc. absorbed by microbeads from the environment)

Additional effects described in literature include uptake by a multitude of organisms (birds, fish, invertebrates and zooplankton), translocation from the intestinal tract into tissues, food-web transfer, embryonic development effects, cellular and sub-cellular effects, as well as transport of pollutants. Due to the fact that microbeads can vary in shape, size and density, some microbeads may float on water surfaces, in the water column, or settle in sediments leaving all organisms that utilize the water vulnerable to their effects. The concentrations of microplastics in the environment are expected to increase, due to mismanaged macro plastic debris and breaking down of existing plastic debris.



There is however, **good news in terms of government regulation and consumer's push on industry to reduce the use of microbeads.** As early as 2009, former Dutch Minister of Environment, Jacqueline Cramer, was a political leader in drawing the attention of the Dutch government, European Union and United Nations Environment Programme to the issue of microplastics and microbeads. Thank-you! On December 28th, 2015 Barack Obama signed a bill prohibiting companies from manufacturing or using microbeads in common personal care products. In Canada, the House of Commons voted in March 2015, unanimously to take measures to add microbeads to the List of Toxic Substances in the *Canadian Environmental Protection Act, 1999*. A thorough scientific review of microbeads occurred in July 2015, which concluded that microbeads should be considered toxic. This would allow preventive measures to reduce microbead release to be enacted. Since then the Canadian Federal Government has decided to regulate microbeads under the Chemicals Management Plan (CMP). Decisions on how to manage harmful chemicals may linger for long periods of time under the CMP process. Often times when risk assessments have been completed, risk management measures often take years to be finalized. Hopefully, microbeads will not become another stalled chemical substance in Canada's Chemicals Management Process.

What can I do to reduce the amount of microbeads released into the environment? Well, to begin you could check your current personal care products to determine if they contain microbeads. You can check the following [Product Lists](#), [Look for the Zero](#) plastic inside sticker, or utilize the Beat the Microbead App provided by beatthemicrobead.org. Key ingredients to watch out for include "polyethylene" and "polypropylene" as both are simply types of plastic. Additionally, when purchasing new products look for natural ingredients such as nut shells and salt crystals in place of plastic alternatives. Finally, you could consider signing a petition or writing a letter to your local Member of Parliament urging them to consider more immediate action concerning the phase out of microbeads from personal care products and other applications. I would highly encourage everyone to consult [Environment Canada's scientific review entitled Microbeads – A Science Summary](#) for further details. We cannot change the amount of microbeads we have already released into the environment, however individually and collectively we take active steps to reduce the amount of microbeads released in the future.

References

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