2024 Algonquin Provincial Park Loon Survey

The haunting calls of the Common Loon symbolize Algonquin's wild country for many people. Nearly every small lake has a breeding pair and there are multiple pairs on the larger lakes. Unfortunately, there are environmental threats to loons throughout their range that could potentially affect numbers here in the Park, including reduced reproductive success through the effects of mercury poisoning in adults increasing due to climate warming, and losses caused by loons dying from avian botulism during migration.

In 1981, we began the Loon Survey to help determine how well loons were doing in Algonquin. Visitors and staff report the lakes where they see adult loons, their nests and young. On average, nests or young were observed on 40% of lakes where loons were reported during the 44 years from 1981 to 2024. Reports from 186 lakes in 2024 included observations of nests or young on 75 lakes (40%), the average. Only a long-term monitoring program can distinguish real trends from normal yearly fluctuations. We need observations from as many lakes as possible.

Please give us a hand by reporting your loon sightings this year. Report forms are available at park offices and the Visitor Centre or you can fill out a form online at https://www.algonquinpark.on.ca/form/loon_survey.php

Photo Credit: Peter Ferguson

Loon Reproduction in Algonquin

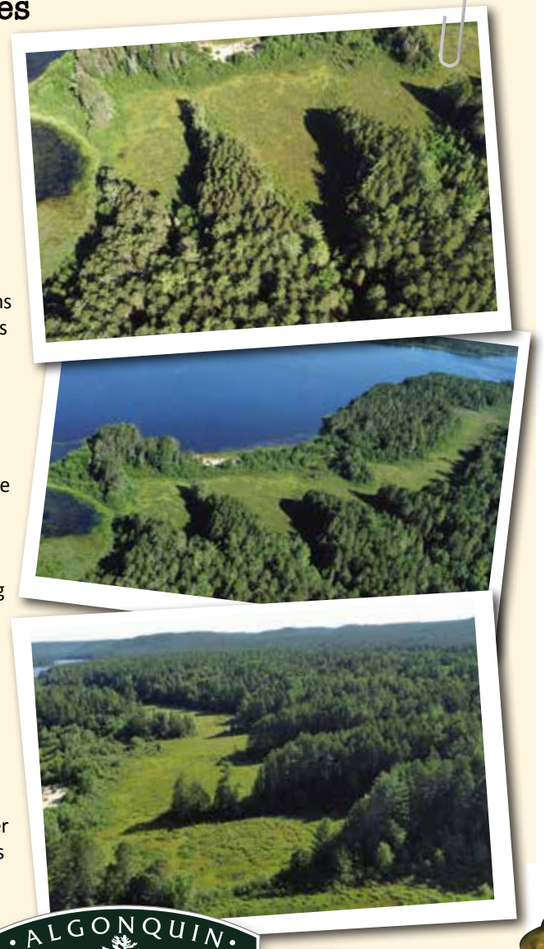
Year	# of lakes reporting	% with nest/young
1981	121	38
1982	184	28
1983	237	21
1984	298	34
1985	210	37
1986	216	35
1987	261	43
1988	260	40
1989	240	41
1990	248	40
1991	201	50
1992	203	39
1993	232	43
1994	183	46
1995	223	45
1996	219	42
1997	173	45
1998	175	42
1999	190	33
2000	216	44
2001	168	39
2002	143	41
2003	120	46
2004	144	41
2005	156	40
2006	147	41
2007	138	43
2008	169	39
2009	146	40
2010	138	36
2011	134	51
2012	128	48
2013	120	52
2014	152	41
2015	129	40
2016	117	44
2017	164	33
2018	152	41
2019	113	33
2020	114	40
2021	167	42
2022	175	46
2023	140	43
2024	186	40

Notes from the Field

By Peter B. Mills

De Geer Moraines

One of Algonquin Park's most striking geology features are the "De Geer Moraines" located east of Lake Travers. They are long, parallel, bouldery ridges that were created when the continental glaciers were melting back several thousand years ago. Exactly how they form remains controversial. Most geologists agree it has something to do with the way a glacier melts back in the summer and how that melt is halted during the winter. But all examples of DeGeer Moraines occur where the front end of the receding glacier was touching a lake, suggesting this contact with standing water has something important to do with the creation of these "washboard" ridges. Although they are most conspicuous from the air the DeGeer Moraines near Lake Travers can be seen from the water if you pay close attention. Many of them peter out into small bouldery points extending into the lake.



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The Raven

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Aliens in the Park

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by Dan Strickland

Editorial update, 2025:

Fishing in Algonquin can truly be an unforgettable experience. Getting out on the water as the mist is rising, casting out to a "good spot" and the satisfying plop of the bait into the water – then you wait. If it all goes well, a powerful strike, a bit of a fight and maybe landing a fine fish. We put a lot of effort into fishing, whether it's planning a route, selecting gear, obsessing over maps, and waking up early to get out there to say nothing of the skills accumulated over a lifetime. But should we be putting more effort into ensuring there will be fish and their habitat into the future? Here at *The Raven*, we will emphatically argue for yes! In 1988, an invader, the Rusty Crayfish was found in Lake Travers. At the time, it was known that Rusties had devasted ecosystems and fisheries elsewhere and we were bracing for the same here. In the three decades since, we think we have been pretty lucky as the damage caused by this species has not been as severe as we expected. We do, however, need to remain vigilant about invasive species. In 2022, another type of invasive crustacean was detected in Algonquin – the Spiny Waterflea. This much smaller species also has major impacts on aquatic ecosystems, where is consumes the food of native species, and thanks to its spines, is difficult for some fish to eat. The Spiny Waterflea has been detected in areas outside the Park for over 15 years, but in 2022, it was found in Kioshkokwi (Kiosk) Lake. Nearby lakes were surveyed too; and Spiny Waterflea was absent in some lakes, but present in others. In 2023, it was found in other distant locations in other watersheds in Algonquin. This species is transported on fishing equipment, boats and trailers, or pretty much

Continued on next page...

Ontario

Continued from Page One...

anything that is in the water. We are asking Park visitors to wipe down their gear between lakes to make sure you don't transport these devastating hitchhikers.

- the editors

It is a common theme in science fiction that an alien life form arrives on a planet (usually ours) and then launches an assault which, if unchecked, leads to the destruction or enslavement of the original inhabitants. Whether the attack succeeds depends on any number of things. The invader may have more powerful weapons or a much greater ability to replace its casualties than the native defenders. On the other hand, the invader may be defeated because of some unforeseen flaw, or by a vigilant hero.

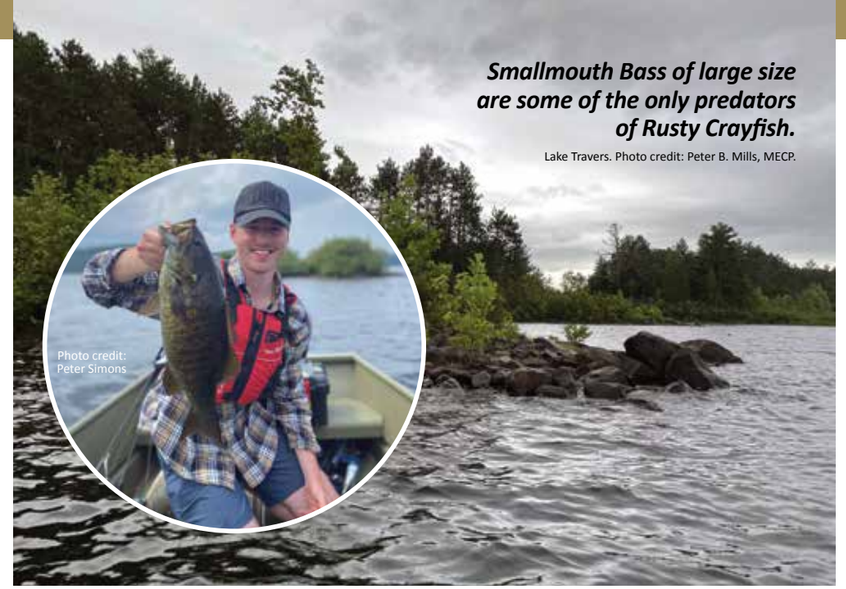
Stories such as these make for exciting books or films, but few people realize that struggles between native and alien species are fairly common on our planet. If anything, they are more frequent nowadays because humans travel more than ever before. In fact, it is humans who often transport alien life forms, either deliberately or accidentally, into new environments. Usually a transplant is not very well suited to its new surroundings, and it quickly dies out, unnoticed. Once in a while, however, conditions are favourable for an alien, and its numbers explode — often with devastating results for local plants and animals. Good examples of such ecological disasters are the introduction of rabbits to Australia, or Rats to North America.

Unfortunately, no area is immune to alien invasions and Algonquin has had some as well, including the Rusty Crayfish in Lake Travers, one of the major lakes on the Petawawa River on the east side of the Park. This species is native to Ohio, Indiana, and Illinois, but it has also appeared in recent decades in other areas to the north, including Minnesota, Wisconsin, and parts of Ontario. We don't know how long it's been in Lake Travers or how it got there, but a good guess is that the fateful event occurred at least a few years ago, when some fisherman emptied his bait bucket into the water at the end of the day. Our presumed culprit probably didn't give the slightest thought to what he was doing. Even if someone had been there to warn him about the consequences of introducing this alien creature to a new lake, he probably wouldn't have taken it seriously. After all, one crayfish is "pretty much like any other," so what harm could it do?

Well, nobody would be very calm about introducing the Rusty Crayfish into our waters if they could see what the same species has done in similar lakes in northern Wisconsin. Once well-known fishing lakes are now almost barren of their original perch and walleye. The weed beds that fed and sheltered the fish are all gone, and in some places the lake bottom actually moves — with the army of Rusty Crayfish that have taken over the lake and achieved densities of 13 or more per square yard! There are even places where people don't swim any more because they were being constantly (and painfully) pinched by Rusty Crayfish.

Such a situation is both alarming and puzzling. Rusty Crayfish never take over so completely in their normal range, and they really don't look all that different from our five native species of crayfish. Why is it, then, that the Rusties have such an overwhelming impact in some of the northern lakes into which they have been introduced? No one really knows for sure, but one or two factors probably contribute to their success. One reason is that they lay their eggs earlier, so the young grow faster than the native species. This means that young Rusty Crayfish have an important head-start over their rivals in the competition for lake-bottom hiding places.

A second reason is that Rusty Crayfish are much more aggressive than native species. They will often drag other kinds of crayfish out of their hiding places and take over themselves. The hapless native species then lose the benefits of shelter and run a high risk of being eaten by fish —while the Rusties that evicted them are safely out of harm's way. In such a situation it's easy to see that before long the Rusties will become the predominant crayfish species.



Smallmouth Bass of large size are some of the only predators of Rusty Crayfish.

Lake Travers. Photo credit: Peter B. Mills, MECP.

Their extreme aggressiveness also makes Rusty Crayfish immune to attack, except from the largest of traditional crayfish-eaters, such as bass. When a fish or even a human diver approaches, they may face their attacker and raise up their pincers defiantly. Unless a bass manages to strike from the rear, it may well end up retreating and violently trying to shake off the Rusty Crayfish that has clamped onto its lips.

Unfortunately, Rusty Crayfish can do much worse things to fish than give them sore mouths. They are voracious consumers of fish eggs, and they also eat the insects, snails, and weed beds that support fish populations. Rusties will eat just about anything dead or alive that they come across, even to the point of scraping algae off rocks if they have to.

Putting it simply, Rusty Crayfish have the happy (for them) faculty of making themselves at least partly immune to predation on the one hand and of completely wrecking the lake's food chain for their exclusive benefit.

By now you are probably wondering what we are going to do to save Lake Travers. Some people have suggested that we could encourage Park visitors to catch and eat crayfish (they are as delicious as lobster) or even start a commercial operation. Unfortunately, current trapping methods are much more effective for males than for females. Since the remaining males can still fertilize all the females present, trapping some males merely removes the competition they provided to the females for food and hiding places, and probably only achieves the production of even more baby crayfish ... which will grow up to be big crayfish ... which will divert even more of the lake's available food ... into the production of even more crayfish.

And if you think that's a happy prospect, think about the following. The best chance of keeping the crayfish in check would probably be to ban sport fishing in lakes where Rusties are present. Large bass, muskies, and walleyes (all present in Lake Travers) are the only predators with even a chance of making inroads into the Rusty Crayfish population. To the extent that we allow the removal of such large fish (through fishing), we are only hurting our prospects of preserving some sort of balance in the Lake Travers food chain. Unfortunately, the people most interested in solving the Rusty Crayfish problem are probably also the people most interested in continuing to catch the big fish that might be part of the solution. You really can't win with this one. Realistically, the only thing we can do is hope that Travers will be one of those lakes (already observed in Wisconsin) where the Rusty Crayfish, for some unknown reason, fails to achieve the complete destruction of which it is capable.

Whatever the outcome, the story of Rusty Crayfish in Lake Travers illustrates two important principles. One is that humans can't just draw a line around an area, call it a park, and assume it will automatically be "preserved" forever. The other principle, of course, is the danger involved in introducing alien creatures to a new environment. To be sure, such introductions usually fail quickly and completely, but occasionally they result in drastic ecological damage. Sadly, Lake Travers may be an example of this because we already have strong reason to believe that the walleye fishing in Travers has just about completely collapsed.

Only time will tell, and you can be sure that someday we will print a sequel to this story. In the meantime, if you will allow us to say it about such an important topic, we all have serious claws for concern. The Rusty Crayfish, a species not native to Ontario, has appeared in Lake Travers. Only time will tell whether it will drastically change the lake's ecology, as has happened in some lakes in the United States.

Northern Clearwater Crayfish *(Orconectes propinquus)* are one of the most common native species found in Algonquin Park.
Photo credit: Kevin Gevaert

Rusty Crayfish *(Faxonius rusticus)*.
Photo credit: Matt Keevil

Editors note: Thirty-seven years later Rusty Crayfish are still present in Lake Travers and thankfully have not exploded in numbers seen in other lakes outside of the park. However, the lakes food web will never be the same and the fishing is not as good as it once was because of it. The regulations around crayfish for use as fishing bait has changed since the 1980s in Ontario. To prevent the spread of Rusty Crayfish and other invasive crayfish, it is now unlawful to transport crayfish anywhere in Ontario. Outside of provincial parks and protected areas, an individual may collect up to 36 crayfish for use as fishing bait, but they may only be used on the same lake where the crayfish were collected. Please note that in Algonquin and other provincial parks, you may not collect crayfish.