

Pollutants threaten iconic Canadian bird

Title

The future looks uncertain for one of the most beloved symbols of the Canadian wilderness, according to a new report from Bird Studies Canada (BirdLife co-Partner in Canada).

The Canadian Lakes Loon Survey 1981-2012 reveals troubling trends for the Common Loon. Pollution (in the form of mercury and acid precipitation) is the suspected cause.

Currently Common Loon pairs are successfully producing enough chicks to maintain a stable population. Unfortunately, Bird Studies Canada's research shows that their reproductive success (defined as the annual number of young raised to six weeks of age) has significantly declined since 1992. And the trends indicate that even worse news may be around the corner. If the current rate of decline continues, Common Loon numbers are expected to begin decreasing within two decades.

"We are approaching the tipping point. Annual reproductive success may soon drop below the minimum level required for these birds to sustain their numbers," says Bird Studies Canada scientist Dr. Doug Tozer, the lead author of the report. "Because 95% of the world's Common Loons breed in our country, Canadians have a critical role to play in monitoring and conserving loon populations."

Mercury and acid precipitation affect lake health and directly impair loon reproductive success. The burning of fossil fuels (e.g., in cars and at coal-fired power plants) causes mercury and acid emissions. From the air, these pollutants make their way into lakes. Common Loons' high position in the food chain makes them powerful indicators of lake health and especially pollution levels. Higher mercury levels make loons slower, and affect their behaviour. Adults with higher mercury spend less time collecting food for chicks and defending breeding territories.

Chicks have compromised immune systems and are less able to avoid predators. Meanwhile on lakes with higher acidity, fish are less abundant and loons produce fewer young. Individuals can make a difference by supporting loon and lake research and conservation, and participating in Bird Studies Canada's Citizen Science programs. The results also support further action to reduce harmful emissions from combustion of fossil fuels. Findings are based on three decades of research by Bird Studies Canada scientists and volunteer surveyors.

Over 3000 Citizen Scientists and Bird Studies Canada members contributed their time, data, and support to make this research possible. More detailed analysis can be found in the paper *Common Loon Reproductive Success in Canada*, published this spring in *Avian Conservation & Ecology*

Bird Studies Canada's [Canadian Lakes Loon Survey](#) program has been tracking Common Loon reproductive success at the national level for 20 years (and for 32 years in Ontario). [Bird Studies Canada](#) advances the understanding, appreciation, and conservation of wild birds and their habitats. BSC is Canada's national charity for bird research and conservation.