

# Capsule on Species at Risk

## Quebec's turtles

Turtles belong to the order Testudines. They used to belong to the Reptilia class but a few years ago genetic analyses revealed a significant difference between these two classes.

In Quebec, there are nine species distributed among five families: *Chelydridae*, *Kinosternidae*, *Emydidae*, *Trionychidae* and *Dermochelyidae*. All species in Quebec are freshwater turtles, except the leatherback sea turtle that is found in the St. Lawrence Gulf and Estuary.

Turtles in Quebec mate underwater in the spring and sometimes in the fall. The eggs are laid the year following the mating, between mid-May and the end of June. The sex of young turtles is determined, among the species, either genetically or by the temperatures the embryo experiences during incubation.

Turtles hibernate on the bottom of watercourses (river, lake, pond, etc.). They stop breathing through their lungs and « breathe » in slow motion through special skin cells the amount of oxygen needed to keep them alive. The water must thus hold enough oxygen to ensure the survival of the individuals.

In Quebec, seven out of the nine species of turtles are at risk, which mirrors quite accurately their worldwide situation for more than half of all turtles are very affected by human activities. Here is a table that shows the situation of turtles in Quebec (the “x” represents the plight of the species):

Species	Act respecting threatened or vulnerable species (provincial)			Species at Risk Act (federal)			
	Vulnerable	Threatened	Likely to be designated as threatened or vulnerable	Extirpated	Endangered	Threatened	Special concern
Common Snapping Turtle							
Painted Turtle							
Map Turtle	X						X
Spotted Turtle			X		X		
Musk Turtle			X			X	
Blanding's Turtle			X			X	
Wood Turtle	X						X
Spiny Softshell Turtle-		X				X	
Leatherback Turtle			X		X		



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Several threats are responsible for the plight of turtles all over the world. The main are:

- Degradation, modification and loss of habitats (urbanization, forestry and agriculture);
- Increase in human activity (demography, building of roads that fragment habitats, concrete walls along streams, etc.);
- Capture of individuals for collection or commercial purposes;
- Accidental death (road, farm machinery);
- By-catch in nets;
- Uncontrolled release in nature of individuals of exotic species that may introduce diseases or cause competition with native species
- Destruction of nests by predators (skunks and raccoons).

Predation has increased with urbanization for the two main predators of the turtle benefit greatly from human presence.

Moreover, populations in Quebec are located in the northern area of range of the turtles, which makes them more vulnerable to any habitat modification and to climate change. Hydroelectric dams and other forms of water systems retention change streams and constitute barriers to the movements of the individuals. They also modify the natural process of erosion, which creates egg-laying sites for turtles.

There is a lot of work left to do to ensure the survival of the species of turtles at risk in Quebec. We must raise users' and workers' awareness (First Nations, foresters, hikers, public and private upland property owners, fishermen, hunters, drivers etc.), protect egg-laying habitats, avoid running over individuals with vehicles, etc. Turtle survival is conditional upon the preservation of natural areas where human activity is reduced and the raising of public awareness towards the harmful impact of collecting certain individuals.

**Common Snapping Turtle**



**Wood Turtle**

