

Attention: Peter Strohmeier

Regarding: House File (HF) 387 – Modifications of Turtle Taking Provisions, Written testimony,

Dear Rep. Vang and Rep. Hansen,

My name is Nicholas A. Cairns, I am a member of the amphibian and reptile Species Specialist Subcommittee (SSC) on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). I conducted research into bycatch reduction and the sustainability of incidental freshwater turtle capture in Eastern Ontario's commercial panfish fishery. My colleagues and I determined that the turtle mortality from this fishery was enough to cause local extirpation (Midwood et al. 2015). This fishery was not targeting turtles so it stands to reason that a focused effort to collect turtles would have an even greater or more rapid impact on Minnesota's populations. Because of this I hope that this legislation will be adopted and these animals will be protected from an unsustainable harvest.

Turtles play an important role in ecosystem function and can make up a substantial part of a freshwater biomass (Congdon et al., 1986). Despite their prevalence in places, they have suffered massive global declines and 50% of freshwater turtle species are threatened with extinction (Turtle Taxonomy Working Group, 2012; www.registrelep-sararegistry.gc.ca). The reason for this varies by species to some degree, but often stems from a reproductive strategy which relies on extreme iteroparity, where adult females reproduce many times. This renders turtle populations particularly sensitive to the loss of reproductive adults. Combine this with delayed sexual maturity, in particular at northern latitudes, and it means turtles are ill-equipped to compensate for additional adult mortality even at low rates (Brooks et al., 1991; Congdon et al., 1994). For example, we modeled that in a population of ~700 snapping turtles in a medium sized lake in Eastern Ontario, the addition of 1 non-natural mortality per year would drive the population to extirpation in ~200 years (Midwood et al. 2015). Using observed data, Keevil et al. (2018) report that a population of snapping turtles in Algonquin Provincial Park failed to recover from the loss of 11 breeding age females even after 23 years. This shouldn't be too surprising considering that it can take 19 years for this species to reach sexual maturity in the northern parts of it's range. Because there are many sources of adult mortality which are extremely difficult to manage, such as subsidised predators and road mortality, the removal of a government sanctioned targeted fishery seems justified.

Minnesota is a beautiful state, I have enjoyed every time I have visited, and in particular those times when I was able to observe wild reptiles. Healthy waterbodies are critical to support the reputation for fantastic outdoor recreation that the state so richly deserves. Turtles are important to these systems and their functions. I understand that there is a socioeconomic element here and I feel for the licence holders who will likely lose some of their income. Unfortunately, turtles cannot be managed like other wildlife and some harvests have to come to an end to preserve nature for future generations. Like in other northern states and provinces, the only solution to maintaining turtle populations in Minnesota is to minimize all sources of turtle mortality as soon as possible and the easiest place to start is with this targeted harvest.

Yours,



Nicholas A. Cairns (MSc, PhD)