RE: "Requesting additional information to be considered in the development of recovery strategies for nine species at risk"
ERO number 019-0189

Tuesday, August 20th, 2019

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Dear Fiona McGuiness,

Thank you for the opportunity to provide comments for the draft recovery strategy of Eastern Whip-poor-will. Wildlife Conservation Society Canada (WCSC) (www.wcscanada.org) is a federally registered charitable organization. Since its incorporation in 2004, WCSC scientists have filled a vital niche as the only national conservation organization in Canada conducting and directly applying science to advance the protection of wildlife in Canada. WCSC's science, derived from our fieldwork, provides a critical foundation for credible, informed decision-making, and plays a key role in helping decision-makers and the public understand the risks, impacts, and consequences of actions and how they affect wildlife and ecosystems. We have demonstrated a track record of leading and strengthening Canada's conservation policies that protect wildlife and wild spaces.

Recovery strategies are not only essential for recovery and conservation of at-risk species, but are also valuable for indicating knowledge gaps, and directions for future research. Ontario's Eastern Whip-poor-will (*Antrostomus vociferous*) have been the focal species of my research outside of WCSC. Starting in 2015 I conducted field-based research on Eastern Whip-poor-will in remote areas across northwestern Ontario; I studied the habitat associations of this species in the boreal forest (Farrell et al 2017), as well as conducted an in-depth landscape-scale study on the effect of the amount of and age of clearcutting at multiple spatial scales in the boreal forest (Farrell et al. 2019). This cumulative experience gives me a unique perspective on some of the content contained in the draft recovery strategy for this species.

In my comments below, I address two areas of the recovery strategy for Eastern Whip-poor-will: (1) the importance of fire and wetlands, and (2) a southern "bias" of the literature for this species. The information presented in my comments and suggestions below are made to be Ontario-focussed, so that the Ministry of the Environment, Conservation and Parks (MECP) can consider them for the provincial recovery strategy for Eastern Whip-poor-will.

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1) ***Fire and wetlands are far more important habitats for Eastern Whip-poor-will than suggested in the draft recovery strategy.***

Within the recovery strategy there is some problematic language about known habitat associations of Eastern Whip-poor-will.

In my general experience, this species' use of burned stands, and the potential importance of fire for these species, should be amplified in the recovery strategy. In Section 3.3, *Needs of the Eastern Whip-poor-will*, the federal recovery strategy states that "old burns" are included in nesting habitat. Later on, in section 4.2, *Description of Threats*, the federal recovery strategy also states that Eastern Whip-poor-will "may be associated with those [habitats] created by fires (Cink 2002)". However, in my research in northwestern Ontario, Eastern Whip-poor-will were found to be as likely to occupy burned stands as they were other important habitats such as clearcuts or wetland openings (Farrell et al. 2017). Because fires are the primary natural disturbance regime in Ontario's boreal forest, it is important to be clear about habitat associations of these birds with fires. Though I agree with the federal recovery strategy in stating that the "extent of this threat [fire suppression] is not quantified for Eastern Whip-poor-will populations", I think the language surrounding this species' habitat association with burned stands could highlight their potential importance. **Overall, I think Ontario should promote monitoring this species' use of burned stands and the role of fires: especially in a system like the boreal forest of Ontario where fire frequency is potentially higher than most other areas**.

I also find that this species' use of wetland as foraging habitat is underemphasized in the current draft. Numerous recent studies have shown the importance of wetlands to Eastern Whip-poor-will. For example, studies at landscape scales found that the amount of wetland in a landscape (English et al. 2016), the proportion of wetland in a landscape (Farrell et al. 2019) and the amount of open habitat including wetland (Purves 2015) had a positive effect on Eastern Whip-poor-will occupancy: some with a very strong positive effect (Farrell et al 2019). **As such, there is much support in the literature for wetlands serving as essential foraging habitats for these species**, especially given that boreal wetlands of Ontario are known to host high insect diversity and abundances (Spitzer and Danks 2006) (i.e. prey sources for an aerial insectivore like Eastern Whip-poor-will), **and I feel that this should be better reflected in the recovery strategy**.

2) ***The draft recovery strategy does not acknowledge or correct a distinct southern "bias" of research in Ontario, or the implications of this for recovery of EWPW***

A majority of studies done on Eastern Whip-poor-will in this province use data from southern and southeastern Ontario. This is likely in part because that region of Ontario is more road-accessible and less remote: making field research easier, especially compared to western/northern Ontario. Our current understanding of Eastern Whip-poor-will in Ontario has a distinct southern "bias", as it is based on almost entirely southeastern studies. Though some studies have used data collected in western/ northern Ontario (e.g. Rand 2014, some of Purves 2015, Farrell et al. 2017, Farrell et al. 2019), a majority of the great, impactful research done on Eastern Whip-poor-will breeding grounds has been based in south/southeastern Ontario or even

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further south in the United states (e.g. Wilson 1985, Garlapow 2007, Wilson and Watts 2008, English and Conboy 2013, Tozer et al. 2014, English et al. 2016 and others). Yet, ecosystems, threats, and landscape composition and configuration are very different across Ontario. Southern Ontario is primarily dominated by urban and agricultural land covers, whereas in western/northern Ontario, the landscapes contain less urban area, more forests, forest management (e.g. clearcutting), lakes and wetlands. Because of these differences, their potential to affect the behaviour and habitat associations of this species, and the lack of studies performed in western/northern Ontario, we have gaps in our understanding of Eastern Whip-poor-will in western/northern regions of Ontario.

It is possible that northern populations of Eastern Whip-poor-will are more numerous and that their distribution extends further north than estimated in the federal recovery strategy. The strategy states there is "a low reliability for the Eastern Whip-poor-will [populations and distribution estimates] as this survey program is not designed to detect nocturnal birds (Partners in Flight Science Committee 2013; Environment Canada 2014a). Also, the Breeding Bird Survey data do not sample the species' entire range at random, having lower coverage in more remote areas". These "remote" areas describe the landscapes of western/northern Ontario because they are, in general, less developed than southern Ontario. Furthermore, these "remote" areas make up a majority of Ontario's land mass.

I recommend, therefore, that **the provincial recovery strategy should include an action to initiate northern monitoring programs to: 1) reduce the southern "bias" of research for Eastern Whip-poor-will, 2) define the northern extent of this species range in Ontario and 3) monitor the potential for northward range shifting as a result of climate change (Thomas and Lennon 1999, Brommer 2004, Brommer and Moller 2010).**

Eastern Whip-poor-will is a unique, charismatic bird species that contributes to Ontario's biodiversity. Unfortunately, as echoed in the State of Canada's Birds 2019 report, aerial insectivores like Eastern Whip-poor-will have, and are continuing to decline more than any other bird group (NACBI 2019). Their suggestions for conservation actions for these species include:

- reducing or eliminating pesticide use
- monitoring insect availability
- demanding action to address the negative effects of climate change on these birds insect prey,
- and lastly to protect pastures, forests and wetlands

The above actions can immediately help protect this significant species. Though recovery strategies are important, it is not enough to simply monitor and study these species without accompanying actions to immediately protect them. Only combining monitoring and research *together with* meaningful habitat protection and threat mitigation will help slow or reverse the decline of these species. I hope that MECP strives to meet this standard of monitoring, and direct conservation action to make a meaningful, positive impact on species at risk in Ontario.

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Sincerely,

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