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Does Culling one Species help another?

Killing mountain lions in Arizona to save bighorn sheep; killing cormorants in Oregon to save salmon; killing barred owls (BC, CA & OR) to save spotted owls; culling grey squirrels to save red squirrels (UK), culling cowbirds to save Kirtland's warblers (Michigan) and finally culling wolves to save caribou (BC). It seems you can't read a newspaper anywhere these days without being caught up in the argument about whether it is ethical and/or environmentally sound to cull one species to save another.

There is certainly no lack of controversy about this method of preserving biodiversity and one can find dedicated knowledgeable people on both sides of the argument. One of the big questions is does "culling" actually work to save the target species? The answer appears to be "sometimes, especially if combined with habitat restoration". An example of a successful culling-restoration program is the one mentioned above that involved culling cowbirds to save Kirtland's warblers. But in this case there was also a concerted effort to improve the amount of suitable habitat available for this bird. This warbler depends on young jack pine stands for its breeding habitat, such stands historically created by wildfires. As wildfires were controlled in the 1900's its habitat disappeared and by the 1970's it was estimated there were less than 500 individuals of this species remaining. A program was started to create large blocks of young jack pine while at the same time culling cow birds (which lay their eggs in the warbler's nest and thus outcompete the baby warblers). This program met with considerable success and now there are estimated to be more than 5000 Kirtland's warblers and there is evidence they are now nesting in Ontario and Wisconsin (areas where they haven't nested since about the 1940's).

The current program of culling wolves in BC to save two endangered caribou herds is almost guaranteed to fail unless there is a substantial concurrent program to expand their habitat. It is not predation by wolves that has brought these herds to near-extinction, but rather loss of habitat. Yes, wolves kill caribou but when a herd has sufficient habitat to maintain itself, the wolves mainly kill the weaker members of the herd and do not kill enough animals to endanger the continued existence of the herd. Caribou and wolves have co-existed for thousands if not millions of years without any suggestion that the caribou might be on their way to extinction. It is only in the last 100 years, as the march of civilization has destroyed their habitat, that the caribou have become threatened. It is not just the actual loss of habitat but the fragmentation of habitat by road building for logging, mining and in the case of the Peace River herds, oil and gas exploration. A similar cull program has been underway in Alberta and more than 1000 wolves have been killed over the past decade in an attempt to save caribou herds there. The conclusion there seems to be that culling wolves can buy time to improve habitat. However there is no doubt that unless there is a significant program to stop habitat fragmentation and loss and rebuild lost habitat, culling of wolves only delays the inevitable.

I think it was Charlie Brown of the Peanuts comic that once said to Lucy, "hoping to goodness is not theologically sound" and I daresay that "crossing your fingers, shooting a bunch of wolves and hoping for the best is not environmentally sound".

The next meeting of the South Okanagan Naturalists' Club will be February 26. Check out our website (southokanagannature.com) for details.

Bob Handfield is past-president of the South Okanagan Naturalists' Club but the views expressed here are his own and not necessarily those of the Club.