SUSTAINABLE FOREST MANAGEMENT NETWORK
RÉSEAU DE GESTION DURABLE DES FORÊTS
Networks of Centres of Excellence
Réseaux de centres d'excellence

SFM Network
Research Note Series
No. 27

Keeping Woodland Caribou (*Ahtik*) in the Whitefeather Forest

by R. Michael O'Flaherty, Iain Davidson-Hunt & Micheline Manseau

"The caribou was given life to live on the land by the Creator; the Creator's plan has been initiated. We cannot give the caribou what they want to eat, we cannot tell the caribou where to live, only the Creator can do this. Even though we create boundaries on maps, we create all kinds of maps and boundaries, saying where the caribou are and where the caribou will eat, we don't know what the Creator's plan is." (Charlie Peters, March 1, 2006)

Highlights

- Research with Pikangikum elders has grounded these results in the indigenous knowledge tradition of Pikangikum people.
- Pikangikum elders support the First Nation's desire to begin commercial forestry but would like to guide innovations in the forestry practices for the Whitefeather Forest.
- The foundation of the customary stewardship approach of the Pikangikum people is based on the belief that the whole landscape needs the same kind and level of stewardship, even if different land uses are practiced in different places.
- This means planning for the Whitefeather Forest as a single area, the whole of which is important to woodland caribou.
- Parks and protected areas will not sustain woodland caribou habitat needs.
- Forest planning and operational practices should provide a forest landscape that ensures woodland caribou are able to move freely across it through time.

The Whitefeather Forest, a portion of the traditional territories of the Pikangikum people in northwestern Ontario, is a vital part of one of the largest areas of contiguous woodland caribou habitat in Canada. In 1996, Pikangikum First Nation began working with the Ontario Ministry of Natural Resources (OMNR), to engage in sustainable forest management planning within the Whitefeather Forest. In 2000, the OMNR established the Northern Boreal Initiative (NBI) with the goal of enabling several northern First Nations to lead the development of new, commercial forest management opportunities in an area north of where forestry is currently licensed.

In order to develop commercial forestry in the Whitefeather Forest, the habitat needs of woodland caribou must be fully considered in any planning processes. Woodland caribou are known to be sensitive to development, have a history of species' range recession and are listed under the Species at Risk Act (SARA). Through centuries of use, the Pikangikum people have developed extensive and detailed knowledge of woodland caribou biology, behaviour and ecology that could contribute significantly to the planning process. Within the context of the NBI, and with the directive of the Pikangikum people, the challenges were to effectively communicate this knowledge to other people, while reflecting the customary stewardship approach and cultural perspectives of Pikangikum people. Pikangikum has developed a land use strategy, "Keeping the Land", that meets these challenges and will guide future forest management activities in the Whitefeather Forest.

Figure 1. The Whitefeather Forest

This research note outlines how the Pikangikum customary stewardship approach of "Keeping the Land" provides the foundation for woodland caribou habitat conservation in the Whitefeather Forest. Research was designed and conducted in close collaboration with Pikangikum First Nation to understand woodland caribou needs from a Pikangikum indigenous knowledge perspective. All land-based information was collected on a trapline-by-trapline basis, working with head trappers who are the senior land stewards, as well as with other knowledgeable people whom were identified by head trappers. Research evaluated the needs of woodland caribou at both site (e.g. feeding sites, calving grounds) and landscape scales (e.g. seasonal ranges, movement corridors), using both social science and natural science methods, and will contribute to the planning and management of the Whitefeather Forest.

Key teachings on how woodland caribou live on the land

Woodland caribou are known as *ahtik* in the Anishinaabe language and are considered to be sentient beings with needs similar to those of the Anishinaabe people. They require the ability to travel about the land, to meet partners, create families and obtain what they need for their families to survive.

> *"I don't know what is going on in Iain's mind, so we have to think of the caribou in that way. I have seen scientists put collars on animals to track their movements but we don't actually know why they are moving about." (Oliver Hill, December 15, 2006)*

Out of respect, Pikangikum elders were not willing to speak for *ahtik* directly; what the elders were willing to share was what *ahtik* have taught them through their experience on the land with *ahtik*.

Pikangikum elders identified a range of sites used by *ahtik*, including winter feeding areas, spring migration trails, summer calving areas and fall rutting grounds. These details on the seasonal distribution of *ahtik* on the land will inform land use decisions, including where to situate certain activities such as forestry and mining. An important lesson learned was that simply recording observation data in a GIS database was not sufficient; what Pikangikum elders have learned from *ahtik* has required additional elaboration beyond simply drawing points, lines and polygons on a map. In addition to spatial data, there are a number of important teachings Pikangikum elders provided that reflect their unique approach to sustaining human/caribou relationships. Following are summary descriptions of some of the elders' teachings about woodland caribou that are relevant to future forest practices.

The importance of large lakes to caribou

Large lakes are important for spring movement of caribou from winter feeding grounds to calving areas, many of which are on islands in these large lakes. Large lakes are used as travel corridors in the early spring (April) because they provide protection against large predators, especially wolves. Unlike most other large animals, *ahtik* are able to run quickly on ice and climb out if they fall through.

> *"When they fall through the ice in the winter time they have the ability to get out of the water because of the way their hooves are structured … When there is no snow on the ice, the caribou can run on the ice. It will not slip. It is even able to gallop ... The caribou is also a very fast swimmer, the fastest swimmer around. Even the best paddler cannot catch up to a caribou when it is swimming." (George B. Strang, February 15, 2006)*

Pikangikum elders also explained how *ahtik* remain on large lakes in the early spring for the safety the ice provides because they are suffering from snow blindness at this time (*suhsuhkuhbeech*), caused by glare from the ice. At this time the *ahtik* also enjoy slurping the yellow slush (*shwahgahneep*) on the lakes. Elder Tom Turtle explains, "In the spring they are out on the lake, digging the slush. They eat that stuff" (March 12, 2004). *Ahtik* have this habit because they "like to eat slush; not for drinking, they just enjoy eating it" (Whitehead Moose, March 23, 2005).

Pikangikum elders indicate that islands on large lakes, as well as raised hillocks within large muskeg areas, are both important sites for calving. These areas allow *ahtik* to escape predators, especially wolf and wolverine. Being excellent swimmers, they are able to easily move back and forth from islands to the mainland.

Relationship between fire and caribou food

Pikangikum elders taught about the linkages between the main food sources and fire. In the winter *ahtik* need to find *wahpuhkahmik* (reindeer lichen including *Cladina* spp. but especially *C. rangiferina*), *wuhkoonuhk* (rock tripe or *Umbilicaria mammulata*), and *weesuhpaynjahck* (horsehair or *Bryoria* spp.), the latter being described as a delicacy for the caribou. Each is associated with mature forest conditions. *Wahpuhkahmik* is a terrestrial lichen generally found on dry sandy soils; *wuhkoonuhk* is found on rock outcrops, especially predominant on rocky slopes leading to a shoreline; and *weesuhpaynjahck* is an arboreal lichen associated with black spruce on poorly drained lowlands.

All three foods can be destroyed by fire which, as noted by the elders, has been the dominant force that has chased *ahtik* away from the Whitefeather Forest. At the same time, as one elder explained, fire renews the land:

> *"The Creator has taught us that there is a match and that is the Thunderbird (beenaysee). When a forest gets too old it can no longer produce animals; they get tired of eating old food in the mature forest. The Creator knows animals cannot continue eating old food. They need fresh food. The Creator brings fire to the land through the Thunderbird."*
> *(Whitehead Moose, July 21, 2006)*

Figure 2. Elder Norman Quill on an early winter habitat survey, December 2006. Photo courtesy of WFMC.

How conventional forestry affects caribou

Commercial forestry, which has pushed northward to the southern limit of the Whitefeather Forest, has provided some potent lessons for Pikangikum people about the effects of sustained yield forestry operations on the land. Pikangikum elders have been consistent in stating that the absence of commercial forestry has been a key factor in keeping *ahtik* on the land in the Whitefeather Forest. At the same time, the elders support the First Nation in its efforts to embrace commercial forestry as a way to provide new forms of meaningful employment that help sustain Pikangikum land-based cultural traditions. The challenge will be for the First Nation to adopt forest management practices that enable Pikangikum people to continue to fulfill their customary stewardship responsibilities for the Whitefeather Forest.

For Pikangikum's elders, their view is that forestry to the south has stripped the life off the land. They explain how the heavy equipment and disc-trenching (to prepare for re-planting) clears the living earth away, leaving only the bare clay, sand and stone, which *ahtik* cannot survive on. Fire also clears their food from the land but it does not clear the life from the land. They feel the evidence for this distinction is found in the contrast between a post-fire landscape with forest renewal according to the natural laws of the land and a forestry plantation under the control of humans. Pikangikum elders indicate that when they visit a post-fire forest, it looks and feels like it should, whereas when they visit a plantation forest the trees and animals do not seem to be coming back the

way they expect it would. Pikangikum elders describe how plantations can not renew the life of the land the way that fire does:

> *"Plantations are different from where there is a fire. Where there is a fire the ground becomes green the next year, and animals come there to feed. When you go to a plantation it is drastically different, you don't see any animals or birds there. The atmosphere is different. When there is a forest fire there are birds singing but in a plantation you don't see any birds. You don't see any squirrels either." (Matthew Strang, February 15, 2006)*

Caribou need to move freely

Pikangikum elders have stressed the importance of ensuring *ahtik* are free to travel across the landscape. They are said to travel very widely, especially in the winter when they need to travel farther to find their preferred foods: "Caribou don't go far in the summer. They stay with their calves in the bush. They will travel far in the winter, moving around to look for food" (George B. Strang, August 5, 2004). Further, elders see the range of their movements as being much larger than the Whitefeather Forest itself. In part, because of this broader landscape level perspective, elders reject the idea that critical habitat composed of specific sites and corridors is sufficient for what *ahtik* need to survive. Elders note it is important that caribou be able to use the entire landscape through time.

Pikangikum elders have expressed concern with the suggestion by several organizations that provincial parks be the principal mechanism for *ahtik* to survive in the Whitefeather Forest. Pikangikum elders consider the outcome of preserving specific areas for woodland caribou as ultimately limiting the freedom of *ahtik* to move across the landscape to find what they need for their survival. Their experience of forestry and tourism is that it has created places where *ahtik* no longer feel free to visit or travel. They see the logic of parks and travel corridors as creating bounded areas in which *ahtik's* ability to survive is controlled by humans. While they are not constrained by a physical fence, the use of the land outside those areas prevents their ability to travel outside of the protected areas.

> *"If you want to preserve the land for caribou, to keep them in a certain area, this is only going to invite trouble; the wolves are going to hear about this. Once the wolves hear about this they are going to come with their tribes and ravage the caribou herds."*
> *(Gideon Peters, March 1, 2006)*

Pikangikum elders want to ensure that all land uses are done in such a way that *ahtik* will be free to use and travel through the whole of the Whitefeather Forest and neighbouring areas. What they don't want to repeat for *ahtik* is what Pikangikum people have experienced themselves - namely being controlled by other humans through a system of land set aside as reserves, whether they be Indian Reserves or nature Reserves. Such an approach to managing life on the land will lead to negative outcomes for *ahtik* just as it has led to negative outcomes for people.

> *"Regulation was not the intention of the Creator; the intention was for every creature to roam freely. Once you draw lines and regulate, that will cause them to be extinct … what are we going to do if we regulate all these boundaries and the caribou still disappear?"*
> *(Gideon Peters, April 21, 2005)*

Implications for future forest management

Each of the above teachings has important implications for "Keeping the Land". The integration of new land uses into the current forest management framework in Ontario will need to ensure woodland caribou habitat requirements are accommodated, including interactions between natural disturbances such as forest fires and commercial harvesting. A brief discussion of recommendations for future forest management based on recommendations from Pikangikum elders is provided below.

Habitat connectivity

Important caribou habitat should be classified based on ecological characteristic and function, rather than by specific geographic locations on the land. In the same way, forest harvest and renewal strategies should

be designed to ensure the same kind of forest is regenerated following timber harvesting, in structural and functional terms, as what was provided to Pikangikum people by the Creator. This includes, for example, the absence of stand conversion, the presence of sufficient functional caribou habitat as part of a larger habitat mosaic, and connectivity within and between different parts of the forest mosaic. Maintaining habitat connectivity will be critical so *ahtik* can move freely across the entire Whitefeather Forest and beyond. The role played by large lakes in providing habitat and movement corridors will need to be preserved, although not necessarily in the same places every year (see below). An overall landscape design that considers the provision of large lakes along with considerations for connectivity and other important habitat elements should provide for caribou habitat requirements through time.

Harmonized management

Forest management planning approaches should reflect the dynamic nature of the Whitefeather Forest landscape, the whole of which, now and into the future, is potentially or effectively woodland caribou habitat. "Keeping the Land" requires all planning tasks be done together, by a unified management authority. The entire Whitefeather Forest should be managed to maintain a high quality habitat mosaic across the entire landscape at all times. This will help account for the loss of caribou habitat through decadence and fire. The management of dedicated Protected Areas, within the context of a larger landscape such as the Whitefeather Forest, should also reflect the dynamic nature of this ecosystem. Forest management planning will need to determine, for example, if Protected Areas will be allowed to burn in order to renew caribou habitat, even at the risk of removing timber values in neighbouring commercial forest areas. Elders do not believe that segregating the land into separate areas slated for either "protection" or "development", each managed separately, will be an effective way of ensuring *ahtik* survival. They believe the best way to manage for caribou is to manage the entire landscape responsibly.

Recommendations from the elders include the need to define areas important to *ahtik* according to their ecological characteristics (i.e. as caribou habitat), rather than by their specific geographic locations on the land. Thus, the function of certain portions of the landscape, such as for travel routes or winter forage, will need to be maintained through time as part of the habitat mosaic across the entire landscape. *Ahtik* are moving animals (*ehbeemosaych*) so a holistic approach is needed to preserve the complexity and dynamism of the forest mosaic as a whole, as opposed to simply preserving specific patches of the current forest that are identified as critical habitat.

Customary stewardship and the Pikangikum people

The customary stewardship approach of Pikangikum people is rooted in their understanding of their personal responsibility for ensuring the land, water and all creatures are protected as sacred gifts from the Creator. In this view, Pikangikum people have been placed on this land with all other living beings by the Creator. They have been given everything they need to survive by the Creator. Customary stewardship, including the harvesting of life, is the basis for reciprocity with the Creator in which the gift of life is renewed. Healthy populations of woodland caribou will enable Pikangikum people to resume hunting of caribou and thereby maintain a relationship with Creation that sustains Pikangikum people and enables them to continue learning about *ahtik*.

As Pikangikum elders point out, the approach taken in the south has ignored the principles of customary stewardship and this is why *ahtik* have fled north.

> *"The caribou are coming closer because they are being chased out of the south. They are being treated like people. People are playing around with the caribou, putting tags on them. That's inhumane. They are fleeing all those things. They know they won't be treated like that when they come up north." (Oliver Hill, February 15, 2006)*

This research has helped to identify an approach to keeping *ahtik* within the Whitefeather Forest that is acceptable to Pikangikum people. The experiences of Pikangikum elders have taught them that adopting the forest management approaches found south of the Whitefeather Forest will not result in the survival of *ahtik* or Pikangikum people. Also, adopting only scientific approaches to caribou conservation that were developed elsewhere will serve only to exclude Pikangikum people from the management responsibilities they hold for their traditional lands. To ensure Pikangikum people continue to exercise their customary stewardship responsibilities for the Whitefeather Forest, future forest management will need to be conducted by a single, unified forest management authority directed by the Pikangikum elders' Steering Committee. In addition, there will need to be a process through which Pikangikum youth are mentored by their elders to take over stewardship responsibilities in the future.

In this way, the adaptation of customary management to the new demands of forest resource management will help keep Pikangikum people on the land and enable them to maintain their aboriginal relationship to the land. The challenge will now be to find ways to implement the Pikangikum elders' vision of economic and cultural renewal that keeps woodland caribou in the Whitefeather Forest.

Further reading

Whitefeather Forest Management Corporation (WFMC). 2006. *Keeping the Land: A Land Use Strategy for the Whitefeather Forest and Adjacent Areas.* WFMC, Pikangikum, Ontario http://www.whitefeatherforest.com.

OMNR (Ontario Ministry of Natural Resources). 2002. Northern Boreal Initiative – Community-based Land Use Planning Approach http://www.mnr.gov.on.ca/MNR/nbi2002/.

Ontario Woodland Caribou Recovery Team. 2005. *Recovery Strategy for Forest-dwelling Woodland Caribou (Rangifer tarandus caribou) in Ontario (Draft).* Species at Risk Unit, Biodiversity Section, Fish and Wildlife Branch, Ministry of Natural Resources, Peterborough, Ontario
http://www.mnr.gov.on.ca/mnr/ebr/caribou_rs/index.html.

Davidson-Hunt, I.J. and M. O'Flaherty. 2007. *Researchers, Indigenous peoples, and place-based learning communities.* Soc. and Nat. Res. 20:1-15.

O'Brien, D., M. .Manseau, A. Fall, and M.-J. Fortin. 2006. *Testing the importance of spatial configuration of winter habitat for woodland caribou: An application of graph theory.* Biol. Cons. 130: 70-83.

Author Affiliation:
Michael O'Flaherty (Whitefeather Forest Management Corporation),
Iain Davidson-Hunt (University of Manitoba), and Micheline Manseau (University of Manitoba)

Acknowledgements:
The authors would like to thank Alex Peters, President of the Whitefeather Forest Management Corporation, as well as the Pikangikum Chief and Council, for enabling and overseeing this research. Paddy Peters, the WFMC staff, elder liaison Oliver Hill and the Pikangikum Elders Steering Group participated directly in this research and in the development of conclusions. This research note is dedicated to the memory of the late Jake Keejick whose teachings have been instrumental in defining the outcomes of this research.

For more information on the SFM Network Research Note series and other publications, visit our website at http://sfmnetwork.ca or contact the Sustainable Forest Management Network University of Alberta, Edmonton, AB. Tel: 780-492-6659. Email: info@sfmnetwork.ca

Coordinating editor: R. D'Eon
Graphics & Layout: K. Kopra

ISSN 1715-0981