the genetics of wolves in Algonquin, found that the current protection of wolves outside of Algonquin has permitted the social structure of wolf packs inside the Park to return to a more natural state. When wolves were being killed outside the Park, 80% of Algonquin packs contained unrelated animals. Today 94% of wolf packs consist solely of related animals. This change appears to have stemmed the flow of Coyote genes into Algonquin wolves. It seems that while the killing of wolves may not have long-term effects on the size of their population, it can have dire effects on the population's genetic structure. Stability in genetic constitution has important implications for the conservation of this and any other species.

Rutledge has made another surprising discovery involving the effects of the wolf cull that took place during the final two years of the Pimlott et al. study. But because her research is not yet published, to learn about it you will have to wait for next year's *Raven*!

I now know that back in 1972 I did not see a Gray Wolf. Instead, I met an Eastern Wolf, an animal whose true identity has only recently been unveiled. Whether it was a "pure" Eastern Wolf or one that harboured a few Coyote or Gray Wolf alleles makes no difference, for those details would in no way change or diminish the precious memory I hold of a wild and magnificent animal bounding through the dark. That night I experienced the indomitable, unfettered spirit of Algonquin. That night I saw a WOLF.

## Going for a hike?

**Your safety is ultimately YOUR responsibility. Be prepared!**

- **Know your limitations!** Check the length, difficulty, and time required to walk the trail before you start out.
- **Allow enough time** to be off trails and back at your vehicle before dusk. In winter, do not start out on any trail after 3 p.m.
- Wear **footwear and clothing** appropriate for the trail and weather conditions.
- **Do not rely on your cell phone.** Service may be "limited" to "none."
- **Overnight parking** at interpretive walking trail parking lots is **prohibited.**
- **Use *caution* when walking trails.** You could encounter wet areas, downed branches/trees, snow, and icy conditions. Regular maintenance on all interpretive trails begins in May and continues to the end of October. Blue markers identify trail routes.
- **Guide booklets are removed** from trailhead dispensers from late October to early May. Booklets are available year-round during business hours at the East and West Gates and the Visitor Centre, or online.
- Carry a well-equipped **Emergency Kit** when travelling away from your vehicle.

## Looking for Internet access?

The Visitor Centre now offers free WiFi internet access… and while there, don't forget to check out The Friends of Algonquin Park bookstore, or enjoy a light snack or meal at the Sunday Creek Café.

## When will Algonquin's leaf colour be at its peak?

Peter Ferguson

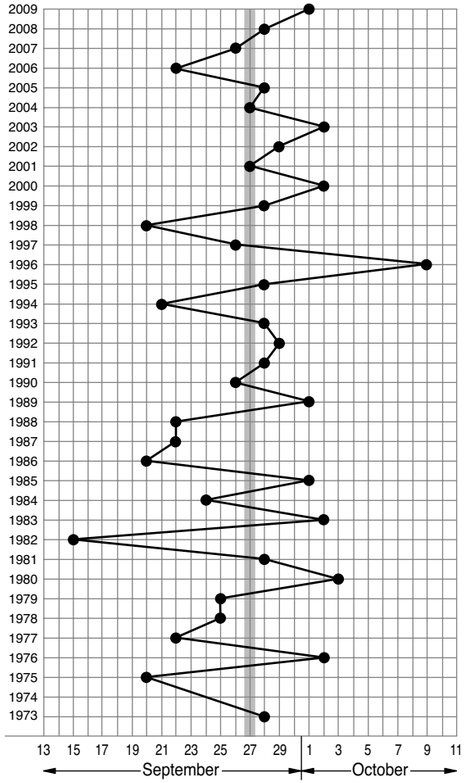
Algonquin colour admirers understandably want to know when the colours will be at their peak but this is difficult to say ahead of time. We have no crystal ball, however, fall leaf colour is usually best from late September through early October. Our graph illustrates the "peak" dates since the 1970s. This may help when you plan your autumn visit to Algonquin.

You can check for regular updates on the Park's leaf-colour status by visiting <www.algonquinpark.on.ca> or <www.OntarioParks.com>

When in the Park, trails with good views of maple colour include:

- Hardwood Lookout (at Km 13.8)
- Track & Tower (at Km 25)
- Centennial Ridges (2 km South from Km 37.6)
- Lookout (at Km 39.7), and
- Booth's Rock (9 km South from Km 40.3).

Enjoy the view!




**Date of Peak Fall Colours** (average is September 27)

*The Raven is available online [www.algonquinpark.on.ca] and a limited number of complete sets of the previous year's Raven are available at the Visitor Centre and the main gates along Highway 60.*


A Natural and Cultural History Digest

Algonquin Provincial Park

# The Raven

ONTARIO PARKS

**Vol. 51, No. 5** **September 1, 2010**


# Autumn Issue

## Why the new look?

Michael Runtz

**An update on Algonquin's wolf story…**

**see page 2.**

You have probably noticed that *The Raven*, the official newsletter for Algonquin Provincial Park, looks different this year. Why the new look?

2010 represents a new era for *The Raven*. For the first 50 years, *The Raven* had only two authors…Russ Rutter from 1960 to 1973 and Dan Strickland from 1974 to 2009. When Dan announced recently that he was going to end his run as the author, the Park thought that we should also retire *The Raven*…but we heard from you and you wanted us to keep the newsletter.

After much deliberation, we decided *The Raven* would continue, but with some changes. The new principal author will be Michael Runtz, a well-known Ontario naturalist, photographer and writer — with a strong connection to Algonquin Park. But we will also introduce guest writers and continue to reprint some of the old *Raven* articles.

*The Raven* will now have six issues a year (two in the spring, two in the summer, one in the fall, and one in the winter). *The Raven* was weekly in the summer but that format goes back 50 years when the newsletter was the only Park publication and represented the Park Information Guide, *This Week in Algonquin,* as well as the natural history essay. This new schedule will allow us to update our visitors with timely seasonal information and safety messages.

We hope you enjoy the new version of *The Raven* and welcome your comments. We know it is not the same but we hope that, after 50 years, you will allow us some flexibility to change!


The Park thanks The Friends of Algonquin Park for its generous contribution to the production, printing and distribution of The Raven for the past 12 years.
**THANKS!** Friends, for your support.

# Algonquin's Wild Canids: Wolves in Coyotes' Clothing?

*by Michael Runtz*

I still recall my first wolf sighting as if it happened yesterday. It was August 21, 1972 and I was howling for wolves with Russ Rutter (co-author of *World of the Wolf* and first author of *The Raven*), Ron and Pat Tozer (former Park Naturalist and founding Director of The Friends of Algonquin Park, respectively). We were near Brewer Lake when a large wolf bounded across Highway 60 right in front of the car. I was ecstatic — Ron claims his back still bears an imprint from my hand slap!

One of the greatest thrills to be experienced in Algonquin is an encounter with a wild wolf. More than a hundred thousand people have done so on Public Wolf Howls and many more have met the animal while backpacking, canoeing, or kayaking in Algonquin's vast Interior. While most of the encounters are of an audible nature (hearing the wolves howl), a few privileged visitors have actually seen the animals. Regardless of the type of encounter, meeting a wolf is a profound experience, one remembered for life.

Wolves have always inspired strong emotions in humans but historically those feelings were not ones of appreciation. When the Park was established in 1893, wolves were on the hit list of Park Rangers for they were believed to be villainous creatures that killed for sheer pleasure. For 65 years, on average more than 50 wolves a year were shot, snared, and poisoned in Algonquin. Although wolves were never exterminated, the reduction of their numbers likely benefited another animal. Dan Strickland, former Chief Park Naturalist and author of *The Raven*, has proposed that the suppression of the wolf population was an important factor in the historic northward range expansion of deer (Dan's theory is self-published as *What Originally Prevented, and What Later Permitted, the Great Northern Expansion of White-tailed Deer*).

In 1957 the Ontario Government initiated a study to determine the effects of wolves on wildlife populations and to provide a factual basis for decisions involving bounties and other aspects of wolf management. The research took place in Algonquin from 1958 to 1965, with biologist Doug Pimlott initially in charge (George Kolenosky oversaw the project's final three years). In 1959, for the first time in Algonquin's history, the killing of wolves was stopped. The protection, however, was not yet permanent; in 1964 and 1965, in order to assess the effects of five years' protection on the demographics of the wolf population, 106 wolves were "collected." This aspect of the study was recently found to have held important consequences for Algonquin wolves.

Prior to Algonquin's establishment, the wolf that roamed the region was the Gray or Timber Wolf, *Canis lupus*, the species that inhabits northern regions around the world. The wolves encountered in Algonquin Park during the mid 1900s were more colourful and much smaller (seven to nine kilograms lighter) than Gray Wolves in northern Ontario. Believed to be a small race of Gray Wolves, they were assigned the subspecies designation *lycaon*. There was much speculation as to why Algonquin wolves were different; hybridization with Coyotes (*Canis latrans*) was offered as one reason.

Michael Runtz

Coyotes expanded eastward from the prairies when human colonization resulted in the removal of much of the eastern forest and the virtual extermination of the wolves inhabiting it. In the south those wolves were called Red Wolves (*Canis rufus*). These small, colourful wolves were rapidly pushed to the brink of extinction. Today, thanks to an intensive captive breeding program run by the U.S. Fish and Wildlife Service, several hundred Red Wolves are alive. However, one major obstacle faces the conservation of that species: Red Wolves readily mate with Coyotes. That trait gave rise to speculation that the Red Wolf was not a true species but rather a hybrid resulting from Coyotes breeding with Gray Wolves.

Coyotes entered Ontario around 100 years ago, with Lake of the Woods and the southern shores of the Great Lakes main points of entry. Within fifty years they occupied virtually all of southern Ontario. However, eastern Coyotes were larger, more colourful, and more wolf-like than their western counterparts, giving rise to speculation that they were hybrids resulting from Coyote/Gray Wolf cross-breeding. Known as "Brush Wolves" or "Tweed Wolves," these wolf-like Coyotes ranged north to areas outside Algonquin.

With large colourful Coyotes, small colourful wolves, and large gray wolves all present and apparently intermingling, the picture of wild canids (wolves and coyotes are members of the genus *Canis*) in Ontario was, to say the least, confusing. Biologist Rod Standfield summarized the situation perfectly when he called it "canid soup!"

But then new research conducted primarily in Algonquin began to unpurée the soup. From 1987 to 1999, John Theberge of the University of Waterloo studied Algonquin wolves, taking blood samples from some of the animals. DNA analysis revealed that there was evidence of Coyote/wolf hanky-panky. In *Wolf Country*, Theberge warned that a serious risk to Algonquin wolves was genetic dilution from cross-breeding with Coyotes, which on occasion seemed to be entering the Park, at least in the southeastern region. Theberge felt that the killing of wolves once they left the safety of Algonquin was the reason for this risk (removal of pack members destroyed the social integrity of the pack and Coyotes, formerly excluded from the Park by wolves, could infiltrate the Park when wolf territories became unoccupied). Largely due to Theberge's efforts a moratorium on wolf killing in the townships surrounding Algonquin was put into effect. This later would be found to have positive consequences for Park wolves.

In the late 1990s a new chapter was written for the Algonquin wolf story when a team of geneticists led by Brad White of McMaster University and Paul Wilson of Trent University made a startling discovery in their analysis of Algonquin wolf DNA. They found that Algonquin wolves were *not* small Gray Wolves nor were they full hybrids resulting from Gray Wolf/Coyote or Red Wolf/Coyote cross-breeding. Their DNA fingerprint was, in fact, nearly identical to that of the endangered Red Wolf of the southern U.S. In other words they discovered that Red Wolves and Algonquin wolves were one and the same. To reflect this relationship, a new name, the Eastern Wolf (*Canis lycaon*), was proposed for both Algonquin and Red wolves.

Some of the wolves' genes contained Coyote alleles, indicating that occasional breeding with that species had occurred, at least historically, and a dash of Gray Wolf DNA in other samples showed that, on occasion, mixing also occurred between those two species. Red/Eastern Wolf alleles were also found in the genes of Coyotes in southern Ontario (and other parts of eastern North America). From these discoveries came a whole new understanding of the wolf and coyote story not only in Algonquin Park but also North America.

The White/Wilson camp proposes that Gray Wolves, Red/Eastern Wolves and Coyotes all shared a common ancestor that lived one to two million years ago. While Red/Eastern Wolves and Coyotes evolved as distinct species in North America around 150,000 to 300,000 years ago, Gray Wolves did so in the Old World, arriving in North America during the last Ice Age by crossing the Beringia land bridge. By the 18th century, Red/Eastern Wolves ranged through the forests of eastern North America, Coyotes occupied the prairies and western North America, and Gray Wolves hunted in northern regions, including what is now Algonquin Park. After human colonization altered the landscape and Red/Eastern Wolf numbers plunged, Coyotes spread east. During this period there was likely some crossing between Red/Eastern Wolves and Coyotes, which accounts for their present-day similarity in appearance. Eventually, northern and southern populations of Red/Eastern Wolves became isolated. The southern population was decimated, and in a courageous effort to save them, the few remaining wild Red Wolves were captured and placed into a captive breeding program, which currently provides stock for release back into the wild. The northern population, now known as Eastern Wolves, pushed farther north when their favourite prey, White-tailed Deer, went through their northward range expansion, which in part was due to the suppression of Gray Wolves. Today Algonquin is home to a healthy population of Eastern Wolves, now thought to be the most genetically pure example of their kind.

Current research conducted by Ontario Ministry of Natural Resources scientist Brent Patterson's research lab continues to provide new insights into Algonquin wolves. Linda Rutledge, who conducted her PhD on