**War for the woods – Canadian Geographic** January/February 2011 issue

**Environmentalists on one side, the forestry industry on the other. How did two groups with different aims call a truce and sign the historic Boreal Forest Agreement?**

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We’re sailing over a sea of green that rolls and heaves as far as the eye can see. Gusts of wind buffet our little airship as we circle lakes and dip into river valleys, following caribou trails and meandering moose deep in the boreal woods north of Cochrane, Ont. A late-August sun has burned off the morning mists and is spotlighting a rainbow of green, from the heathery colour of lichen to the emerald of new growth and the fire-black greens of Jack pine.

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| Range of the boreal forest's caribou |
| See the range of the boreal forest’s caribou (Map: Steven Fick/Canadian Geographic) |

In the front seat, beside the pilot of our Bell LongRanger helicopter, is Janet Sumner, who looks like a hip, middle-aged schoolteacher. The daughter of a plumber from London, Ont., she has a degree in physics from the University of Western Ontario and an abiding affection for urban life. Sumner is the executive director of one of the big players in environmental politics in Ontario, the Wildlands League, which is the provincial chapter of the Canadian Parks and Wilderness Society.

Accompanying her is Al Thorne, in jeans, workboots and checkered shirt, who stands at the butt end of the millions of trees that his company plucks from Canada’s boreal forest every year. Thorne is chief forester in Ontario for Tembec Inc., an integrated multi-mill forestry company with more than 6,000 employees. He’s a Newfoundlander with a degree in forest engineering from the University of New Brunswick and forestry in his blood. His father and grandfather both worked in the once giant newsprint mill in Grand Falls-Windsor, N.L., which shut down in 2009 after operating for nearly a century.

They’re a study in contrasts, these two. She’s a Torontonian, a big-city girl who admits she’s never really been a “nature nut.” He’s based in Timmins, a mining and forestry town in Northern Ontario, and has lived and worked in forestindustry towns from British Columbia to Newfoundland. She sees the forests. He sees the trees. She thinks like a physicist and talks about environmental problems from “a planetary perspective.” He’s the engineer, all process and problem solving. Her job is to help conserve Ontario’s boreal forest. His is to turn it into lumber and pulp. Yet here they are, sitting together, exchanging notes, learning about each other’s job.

Sumner and Thorne and their counterparts across the country are putting into action the grand principles of the Canadian Boreal Forest Agreement. That’s the historic accord signed last May by 21 major forestry companies and nine of the biggest players in the environment movement, from Greenpeace and the David Suzuki Foundation to The Nature Conservancy and the Canadian Parks and Wilderness Society. Under the terms of that 66-page agreement (see [sidebar](http://www.canadiangeographic.ca/magazine/jf11/boreal_forest_agreement4.asp#sidebar2)), the environmental partners agreed to stop their campaigns against buyers of Canadian forest products, such as The Home Depot and the Victoria’s Secret catalogue. For their part, the 21 signatory companies committed to ensuring their operations contribute to “a better protected, more sustainably managed Boreal Forest.” That forest extends from the Yukon to Newfoundland and Labrador, directly and indirectly employs more than 600,000 Canadians and is the economic engine of almost 200 communities.

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| Lifecycle of a log from the woods to your house |
| Watch the lifecycle of a log from the woods to your house. |

So, for the moment, we have a suspension of hostilities between the two major combatants in Canada’s long-running war in the woods. There are other players, other battles, under way in those same woods between and among governments, First Nations, resource-dependent communities, mining companies, fishing-lodge owners, berry-pickers, mushroom harvesters — the list goes on. But the hope is that if the environmentalists and forestry companies can agree on the wise use of the boreal’s resources, then other territorial, resource and environmental concerns can be addressed by governments in a broader and equally inspiring agreement. That’s the grand hope. In the meantime, though, we have a truce, and both sides are now busy in the woods trying to turn the Boreal Agreement’s lofty principles into an enduring peace. Will they succeed? To answer that, we need to understand what brought both sides to the table in the first place.

“Moose at two o’clock,” shouts the helicopter pilot. Thorne, who has been studying a satellite map of the forest we are cruising over, turns to scan the landscape, and Sumner trains her video camera in the direction of the big ungulate. This Northern Ontario boreal forest, a mix of black and white spruce, Jack pine, tamarack, balsam fir and balsam poplar, is ideal habitat for moose. It’s the boggy southern edge of the Hudson Bay Lowlands, where the granite of the Canadian Shield gives way to the vast wetlands that cover almost 25 percent of the province.

It’s also ideal habitat for woodland caribou, and soon we see their ancient trails skirting lakes, edging along hillsides. What we don’t see is caribou. They’re skittish, and their mottled brown and beige colouring is ideal camouflage in the boreal forest. Woodland caribou inhabit a range that stretches from the Northwest Territories to British Columbia, across the northern Prairies all the way to Labrador, but they are listed by the federal government as a threatened species. Environment Canada scientists who have studied woodland caribou say they thrive in “large tracts of relatively undisturbed, older forest habitat.” Their extensive ranges allow them “to spread out so that they are harder for predators and hunters to find.” Pierce the forest with a logging road or a cutline for power pylons, and the caribou disappear. Those lines of access become predator highways that wolves — and humans — range along to hunt. But that may be only one of the reasons caribou flee forest that has been disturbed by humans. Scientists just don’t know. What they do know is that caribou are good indicators of the ecosystem health of the boreal forest. Their absence is a sign that something’s out of balance.

The recovery of caribou populations is one of the core objectives of the Boreal Agreement, and it’s the focus of many of the exchanges today between Sumner and Thorne. Across the country, old-style clear-cuts have given way to new models of tree harvesting. New cuts tend to be smaller, dispersed across the landscape, more organic in shape and set well back from lake shorelines and riverbanks. But those cuts require a more extensive network of roads and, in the end, a larger disturbance of the forest. What Sumner and Thorne are discussing is a pattern of harvesting that is more concentrated in commercially high-value stands already accessed by roads, leaving larger areas undisturbed. So if a section of Tembec’s tenured forest already has a power line running through it, then Thorne assesses it for its timber stock. Untouched forest, intact and contiguous, is what Sumner would like to turn into “no-go zones.”

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| What makes up the boreal forest? |
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“If you take a landscape that’s intact and drive one road through it, the system is compromised,” says Sumner. “Federal government scientists calculate that when you get to 38 percent disturbance thresholds, the probability is that the caribou have, at best, a 50 percent chance of survival.”

Sumner is skeptical, too, of claims that caribou will return to areas that have been logged.

“First of all, if you say that caribou have returned to logged land, you have to bear in mind that the land was logged by horse 50 or more years ago,” she says. “That caused less disturbance than contemporary logging methods do. But we have no scientific proof that caribou will return to logged land. And when we don’t have definitive proof about the habitat of a threatened or an endangered species, we are required by provincial law to act with caution.”

Thorne says his company started working with the environmental community on caribou protection after a scientific assessment in 2002 of the threats to the habitat of the animals. The boreal population is now a listed species under the terms of Canada’s Species at Risk Act. Listing a species means a recovery plan must be developed. Tembec officials reckoned they wanted to be out front of the issue, and that became part of Thorne’s job as chief forester responsible for management plans that “show not just how we’re going to harvest but how we’re going to regenerate, manage for wildlife, maintain water quality and take into account fisheries and remote tourism operations, such as hunting and fishing lodges.”

[**What is old wood good for?**](http://www.canadiangeographic.ca/magazine/jf11/energy_wood.asp)
Low-quality timber gains new value as “energy wood”

[Read more »](http://www.canadiangeographic.ca/magazine/jf11/energy_wood.asp)

At Thorne’s suggestion, the helicopter pilot drops down to a small lake. A treeless nub sticks out from the southern shoreline. We land on it, disembark and hike into a forest of black spruce anchored in boggy ground with moss so deep our boots leave prints as if they were stamped in snow. The spruce tower 25 metres above us, arrow-straight sticks that sway in concert with the winds. Needles appear only on the highest branches, each reaching out for a glimpse of the sun. At the base of the trees are deep carpets of lichen.

“That’s the main winter food for the caribou,” says Sumner. “It takes 50 to 75 years to regrow.”

As a student of physics, Sumner sees in those clusters of lichen not just food for caribou but vegetation vital to planetary health. Living vegetation stores carbon. Decaying vegetation releases it to the atmosphere, each molecule becoming part of the chemical umbrella that traps solar heat and enhances global warming.

“Two-thirds of the carbon content of the boreal is on the forest floor, locked into deep, spongy layers of moss and other vegetation,” says Sumner. “In the Amazon, the bulk of the carbon is in the canopy. When we look at the boreal forest, which is the largest storehouse of carbon on the planet, we have to ask whether we can afford to fragment it, to compromise its ability to retain carbon. The planet is a living ecosystem that requires large-scale living ecosystems to function, to breathe, to clean water. If we have any hope of controlling the carbon cycle, we have to make sure we keep the carbon that we have in existing ecosystems

Thorne sees the same forest, absorbs the ecological lessons and contemplates how to square Sumner’s concerns with feeding Tembec’s mills with black spruce and keeping his fellow townsfolk employed.

“For us, very wet ground like this is where we tend to find black spruce,” he says. “We log in winter here. Spruce trees drop seed over years, and that seed stays quite viable in the moss layer for decades. So by cutting after freeze-up, we don’t damage the seed and these areas regreen quite nicely.”

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| Historical photos of Canadian logging |
| Glimpse historical photos of Canadian logging. |

Logging in winter also means not carving out new year-round roads.

“By law, we are obligated to mimic nature,” says Thorne. “We are actually trying to go back to pre-industrial conditions. We even try to factor in what the natural fire cycle would be.”

While Thorne redraws the map of Tembec’s harvesting plan for the coming seasons, equally big changes are taking place at the company’s mills. Back in Cochrane, we tour Tembec’s sawmill, which swallows 40 truckloads of black and white spruce a day. In the not so distant past, those logs would have been turned into two-by-fours; everything else — bark and sawdust and shavings — was considered waste that cost money to dispose of. But the industry has redefined its business. It now thinks in the broadest possible terms about the efficiency of its operations and the forest products it extracts from the wood (see [sidebar](http://www.canadiangeographic.ca/magazine/jf11/boreal_forest_agreement3.asp#sidebar1)).

At the Cochrane mill, the bark is a fuel source for a neighbouring power plant. The wood chips are used to make pulp for newsprint. Some of the wood shavings are shipped to southern Ontario and sold to a company that bags it for bedding for pets and livestock. The 20 truckloads of sawdust produced every week are used to manufacture particleboard. All of this is in addition to the main product of the mill: stud two-by-fours.

LUMBER BY THE NUMBERS

* Forest sector revenues: $54.2 billion
* Total exports: $23.6 billion (pulp: $5.2 billion; paper: $10.9 billion; lumber: $4.1 billion; panels: $1.5 billion; other wood products: $1.9 billion)
* Total direct and indirect employment: 604,300 jobs
* Job losses since 2006: 85,400

All data are for the year 2009. Source: Statistics Canada.

At the Ottawa headquarters of the Forest Products Association of Canada (FPAC), president and CEO Avrim Lazar says Canadians don’t realize how much the industry has changed in the past decade.

“The classic model of the industry is, you take out your two-by-fours and make pulp from the chips,” he says. “The waste used to go to either a beehive burner, which can cause cancer, or a landfill, which produces methane that has a 28-times greater greenhouse-gas impact than a molecule of carbon dioxide. Now the bark is used for energy. And we are looking at turning other woody residue into bioethanol or biodiesel. And you can also extract chemicals. Anything from rayon to nanocrystalline for cellulose. Stuff you can use for road paving. Stuff you can use for medicine.”

Lazar, a former assistant deputy minister at Environment Canada, is credited with leading the industry to its historic entente with the environmental community. He has the lean physique of a runner and has invited a yoga teacher to offer weekly sessions to his staff at FPAC. Lazar believes mills of the future will be “biological refineries. Our waste stream is not that different from the chemical composition of fossil fuels, of crude oil. It’s just fresher and still inside nature’s cycle, as opposed to going outside nature’s cycle. So we should be able to fractionate our woody residue, using some for pulp, some for energy and some for chemicals.”

The drive to innovate was born of desperation. Since the early 1980s, the industry has been engaged in a long-running softwood-lumber battle with the United States. U.S. producers say low provincial harvesting fees charged to Canadian companies operating on crown lands constitute an unfair subsidy. Those battles restricted or added new duties to exports to the United States, forcing Canadian mills to become cutting-edge efficient. But the collapse of the U.S. housing market, beginning in 2008, and the rise in the value of the Canadian dollar have driven many of even the most efficient producers to bankruptcy. Although Canada remains the world’s largest exporter of forest products, sales plummeted from $88 billion in 2005 to almost $54 billion in 2010. Last year in Ontario alone, the harvest fell from a recent peak of 22 million cubic metres to 10 million cubic metres.

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| Boreal Forest Agreement |
| Although the world’s largest exporter of forest products, Canada’s sales plummeted $35 billion in only four years. (Photo: Tobin Grimshaw) |

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| http://www.canadiangeographic.ca/magazine/jf11/images/thumb_boreal_nav.jpg[**War for the woods**](http://www.canadiangeographic.ca/magazine/jf11/boreal_forest_agreement.asp) |
| <http://www.canadiangeographic.ca/magazine/jf11/images/boreal_map_lg.jpg>**Map**[See the range of the boreal forest’s caribou](http://www.canadiangeographic.ca/magazine/jf11/images/boreal_map_lg.jpg) |
| http://www.canadiangeographic.ca/magazine/jf11/images/thumb_sidebar.jpg**Sidebar**[What are the details of the boreal agreement?](http://www.canadiangeographic.ca/magazine/jf11/boreal_forest_agreement4.asp#sidebar2) |

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Lazar says the current crisis has made it clear to the entire industry that “we have to become less dependent on the Americans. Sell more to China. Sell more to India. Extract more value from every tree. And we’ve got to be not just ahead of the curve on the environment — we’ve got to translate being ahead of the curve into some sort of market advantage.”

Many of the forestry companies that FPAC represents have concluded that they need to be not only innovators but green innovators. In addition to its battles with U.S. protectionists and the crippling impact of the economic crisis, the industry has been a whipping boy for the entire environment movement for more than two decades. And as the environment movement has matured, becoming more scientifically literate, its strategies more sophisticated, the campaigns against the industry have become more effective. A decade before the Boreal Agreement, environment groups began pressing industry members to clean up their reputations and processes by submitting to the Forest Stewardship Council (FSC) certification program, an international inspection system which guarantees that labelled forest products come from responsibly managed forests.

Lorne Johnson, a Montrealer with a commerce degree who worked for a finance company before obtaining a second degree in forest economics and joining World Wildlife Fund Canada, says those early FSC campaigns got plenty of traction. The environment groups persuaded Kimberly-Clark, the world’s largest tissue manufacturer, to commit to FSC. Quebec-based hardware and lumber retailer Rona signed on as well. A good part of the reason the campaigns worked is that the landscape of the retail industry had changed.

PARSING THE BOREAL AGREEMENT

Signed by 21 of Canada’s biggest forestry companies and nine national environment organizations, the agreement commits both sides to:

* a stronger, more competitive forest industry;
* a better-protected, more sustainably managed boreal forest.

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| A rundown of the outcomes of the boreal agreement |
| Get a rundown of the outcomes of the boreal agreement. |

It applies to more than 72 million hectares of Crown-owned boreal forest licensed to the companies, from British Columbia to Newfoundland and Labrador. It also acknowledges that governments are the final authority and that aboriginal peoples have constitutionally protected aboriginal and treaty rights and titles to parts of the boreal forest.

The agreement has six strategic goals:

* development of world-leading boreal “on-the-ground” sustainable-forestmanagement practices based on the principle of ecosystem-based management, active adaptive management and third-party verification;
* completion of a network of protected areas that, taken as a whole, represent the diversity of ecosystems within the boreal region and serve as ecological benchmarks;
* protecting species at risk in the boreal forest, including the woodland caribou;
* reduction of greenhouse-gas emissions along the full life cycle, from the forest to the end of product life;
* improvement in the prosperity of the Canadian forest sector and the communities that depend on it;
* recognition by the marketplace (e.g., customers, investors, consumers) of the agreement.

Built into the agreement are a series of milestone steps that range from agreeing on a list of best-forestry practices and dates for implementing those practices to plans for the further reduction of greenhouse-gas emissions in all aspects of the forestproducts production chain. For additional information on the terms and details of the agreement, go to[www.canadianborealforestagreement.com](http://www.canadianborealforestagreement.com/).

“There used to be mom-and-pop lumberyards across the country,” says Johnson. “To mount a campaign to get them to adopt FSC? Couldn’t have done it 20 years ago. But Home Depot comes on to the scene and becomes the biggest retailer of lumber in North America. That changes everything. IKEA is another example. Furniture-makers in the 1950s? You could never have done something like this. IKEA, we could talk to them.”

By targeting their campaigns at leading retailers of forest products, environmentalists hit a soft spot. It’s one thing to accuse a logging company of destroying caribou habitat. It’s quite another to publicly accuse a market-sensitive retailer of selling caribou-killing lumber.

Tembec was one of the first forestry companies to commit to FSC certification. In 2001, the company signed an agreement with World Wildlife Fund Canada, and Johnson was seconded to the company for three years to help it navigate the process.

“This agreement was the first of its kind, where you saw a large NGO sign a partnership agreement with a large forestry company,” says Johnson. “In fact, at the time, it was the largest ever commitment to FSC globally, and it really put FSC on the map in Canada and caused quite a controversy in both camps.”

Johnson is now one of the two executive directors of the secretariat established by both the industry and the environmental movement to implement the Boreal Agreement.

“We are basically creating a safe place for discussions to take place on the issues,” says Johnson. “How to manage for caribou, maximize the biodiversity aspects and minimize the economic impact — and then to work in the marketplace. That’s the quid pro quo for the forestry companies. We have a commitment from all of the groups to cease running ads. So no more negative ads or boycotts. Instead, they’ve agreed to come to the table, negotiate agreements on the boreal and the protection of the caribou and then sing their virtues.”

Lazar acknowledges the importance of the FSC campaign but says the certification standards were just the start of the greening of the industry, which began with aggressive action by all FPAC members to meet the greenhouse-gas-reduction targets in the Kyoto Protocol, the UN agreement on climate change. He says Canada’s forest industry’s greenhouse-gas emissions are now 10 times lower than the Kyoto targets.

The changes in the forest industry’s practices were accompanied by increasing contact between the leading environmentalists and company executives. Lazar saw the contacts in strategic terms and described the process he initiated after he was hired by FPAC eight years ago as a step-by- step effort that began with talks with Ducks Unlimited, an organization “more prone to cozy up to business.” At each step, he was looking for “conversations characterized by honesty and good faith.”

On the environmental side, many were frustrated by the lack of action on the part of governments to address the plight of the caribou. So despite the success of campaigns against the retailers, the signature species featured in many environmental fundraising mailings was still losing ground.

To Sumner, it was time to move from emotional appeals to the hard work of applying what science was telling her about the carbon cycle and caribou-habitat needs. And Johnson, who had worked with the industry, believed that to get government to take action, a new and more collaborative approach was necessary.

“The more noise and tension in a policy-making decision, the less thoughtful the response,” says Johnson. “This agreement can lower the rhetoric, the positioning, the advertising.”

Both the environmentalists and the forestry officials who signed on to the Boreal Agreement are careful to point out that they don’t have the final say about what happens in the woods. Final authority rests with federal, provincial and territorial governments, and they have other players to consult, principally First Nations with claims to many of the forest tenures that have been allocated to the forest industry. Still, many environmentalist leaders hope the Boreal Agreement can serve as a road map for the way forward. And they have successes they can claim. As Lazar says, 90 percent of the global forest industry operates with no certification standards for sustainable practices, “whereas 100 percent of [FPAC] members” produce forest goods that are certified. They are doing so in good measure because Canadian environmentalists made certification an issue.

The Boreal Agreement recognizes the importance of allowing the industry to grow, to preserve mills and jobs and to achieve ambitious climate-change targets while enhancing the biological health of Canada’s great boreal forest. It replaces campaigns with the hard work of face-toface exchanges. People such as Sumner learn how mills operate, get to know the communities dependent on them and understand how forest-management plans are developed, and forestry officials such as Thorne learn the physics of the carbon cycle. And if that doesn’t seem like such a radical change, think of the millions of dollars climate-change campaigners are still spending on ads that demonize the oil sands industry and the tens of millions the industry is pumping into efforts to restore its reputation.

Not so long ago, the forest industry was doing the same thing, trying to rehabilitate its reputation with billboards, says Sumner over lunch with Thorne after the helicopter survey.

“That can work for a period, but the best solutions come out of having conversations. When you’re in a community and meeting people who may lose their jobs because of the changes you are proposing, it’s hard to maintain your moral indignation. That’s why the Boreal Agreement is not just about saving caribou. It’s about people and communities and a viable forest industry.”

Thorne’s first priority is to maintain and properly manage an uninterrupted supply of trees for the mill in Cochrane, a town of 5,500 whose fortunes are closely tied to the health of the forest industry. But he’s proud of his company’s commit - meant to sustainable harvesting. For him, the crucial challenge is not whether the industry is prepared for change but whether consumers here and abroad are willing to treat sustainably harvested wood products as they do fair-trade coffee, and open their wallets to help preserve the health of Canada’s forests and all the threatened creatures that inhabit it.

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Questions to be answered in your notes

1. What is the Canadian Boreal Forest Agreement?
2. Who are the two major groups involved?
3. How many Canadian are directly employed because of the forest?
4. What kinds of trees grow in the Northern Ontario Boreal Forest?
5. How are the woodland Caribou affected by logging operations?
6. What does it mean to list an animal on the species at risk?
7. What is the main winter food for Caribou and how long does it take to regrow
8. Where is most of the carbon stored in the Boreal forest vs. in the Amazon?
9. In what season does Tembec harvest black spruce and why is that important?
10. How many truckloads of black and white spruce to go to the Cochrane sawmill each day?
11. List the parts of the tree that is not made into 2X4’s and how are they (re)used?
12. List some of the reasons Canada’s forest product sales plummeted between 2005 – 2010.
13. How many forest companies and national environment organizations are involved in the Boreal Forest Agreement?
14. How many hectares are affected by the agreement?
15. Name 2 leading retailers who were targeted by the environmentalists.
16. Despite the agreement being between forestry officials and environmentalists, who has final say about what happens in the woods?
17. What are your insights into the Boreal forest agreement? Do you think this is step in the right direction for environmentalists and loggers working together. Explainl