

*A tribute to the logger—the person who faces the challenge of weather, whop-
ping debt, temperamental equipment, and equally temperamental markets
because they love the work.*

—Ross Whaley
Senior Advisor, Adirondack Landowners' Association

*In this book Steve Bick has captured authentic conversations with some of the hard-
working people who make their living in the Adirondack Forest. He's also taken some
great photos. This is a book to hold onto.*

—Joseph Phaneuf
Executive Director, Northeastern Loggers' Association

*Two roads diverged in a wood, and Steve Bick took the one less traveled by portraying
loggers in a positive light. By doing so he opens up new frontiers for forest enterprises
and helps save timber and loggers at the same time.*

—Laura Huggins
Editor & Research Fellow, Property & Environment Research Center

*Read the book and you'll have a better understanding of forestry in the Adirondacks
and the strong backs and sharp mind, who make the system work.*

—Al Steele
Forest Products Specialist, US Forest Service

*This is an up-close and personal description of the region's logging and timber pro-
cessing activities with a strong focus on the people involved. It will help in under-
standing an evolving industry of great importance to the Adirondack Park's economy
and open space character.*

—Steve Erman
Special Assistant for Economic Affairs, Adirondack Park Agency

*Steve uses a story telling approach to guide us through the interesting world of logging
in the Adirondacks. What we discover along the way is the ingenuity, grit, and pas-
sion of the forest entrepreneurs who make things happen in the woods.*

—Luc Lebel
Professor & Program Leader of Forest Operations, Laval University

*Long overdue recognition of a vital part of the equation that has gone unappreciated
for far too long. Given by a professional who knows every facet of the equation.*

—Mart Allen
Columnist, Adirondack Express

Book design by Mandy-Scott Bachelier

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Steven
Bick

FOREST ENTERPRISES OF
THE ADIRONDACKS

FOREST ENTERPRISES OF THE ADIRONDACKS

SECOND EDITION



By STEVEN BICK
A FOREST ENTERPRISE INSTITUTE PUBLICATION



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OTHER BOOKS BY STEVEN BICK

Adirondack Forest Owner's Manual. 2007

Harvesting Woody Biomass: A Small Business Guide. 2012.

Timber Measurements: A Practical Guide for Working in the Woods. 2007.

Northern Tree, Timber and Woody Biomass Volume Tables. 2008.

The Hardwood Log Desktop Reference Book. 2008.

The Landowner's Guide to Conservation Easements—with Harry L. Haney Jr. 2001.

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FOREST ENTERPRISES OF THE ADIRONDACKS

SECOND EDITION

STEVEN BICK

Edited by Joseph Phaneuf

A Forest Enterprise Institute Publication



FOR DARBY

“What is the use of a book, thought Alice,
without pictures or conversations?”

—Lewis Carroll
Alice's Adventures in Wonderland

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F O R E W O R D

When Steve Bick came to PERC as a visiting scholar, he presented an early version of this book. He projected images of woodsmen at work in the mud, snow, and leaves of Adirondack forests, transporting us from our conference room in the Northern Rockies, and connecting us to the Adirondack forest industry.

In this book, Bick brings that connection to a broader audience. He highlights the importance of the people at work in the woods by introducing some of the characters that play a role in forest enterprises of the Adirondacks.

Few people today are closely connected with loggers or wood processors. But most people use wood and wood products everyday. Concerned consumers will value the insight that these chapters provide into the process of getting wood from the forest to the market.

In addition, many people have an appreciation for the forests, particularly in the Adirondacks. Residents and visitors are drawn to the natural woodland setting and to the many recreational pursuits that the forests provide.

Logging is often perceived as at odds with forest appreciation and recreation. Indeed, logging can be noisy and messy while it is underway. But the intrusion is temporary, and short-lived. Loggers rarely revisit the same area more than once a decade, unlike, for example, recreationalists, who often return to the same area every year.

Furthermore, loggers are truly stewards of the woods—their livelihoods hinge on the continued vitality and productivity of the forests. Loggers work hard to ensure that the forests will continue to provide for future generations as they have for past and present generations.

At the same time, not all forest enterprises are alike. In the Adirondack Forest Owner's Manual, Bick quotes one logger who observes, "There's no single best way of doing things here, so we try a little bit of everything." In the Adirondacks, there are as many different approaches to logging as there are loggers. And these chapters bring out the personalities associated with each different business, while demonstrating that a variety of different business models are viable in the Adirondack forest industry.

If you don't know much about working in the woods, Forest Enterprises of the Adirondacks provides the perfect introduction to many aspects of forestry. Whether you are used to admiring the forests from afar, or from under the canopy, this book will give you another angle from which to view the woods—as a workplace, a source of renewable products, and an important component of the Adirondack economy.

—Alison Berry
*Property & Environment Research Center
Bozeman, MT*

P R E F A C E

It's very satisfying to know there is enough interest in this book to warrant a second edition. I always thought the book could be better and I hope the slight changes and corrections in this edition will make it so. It was tempting to make big changes and additions, but I resisted—those things can wait for another book.

The other books I've written are, I suppose, useful references in their own way. This one was meant to be more enjoyable and it is certainly the one that people like to talk with me about the most. You can thank my wife, Jennifer Hartsig, for that. She is subjected to my forest industry observations on a daily basis and was the first to suggest that putting them in a book would make a nice contrast to my other work ("write something interesting this time," she said).

Much of what has been written for a general audience about logging is historical, describing how things were done in the past. I want to present a contemporary view in the hope of updating the public image of loggers in the Adirondacks. This view six years old now and some interesting changes have taken place, but the general descriptions still hold up. If you are reading this many years later, you're getting front row seat to the good old days my generation has known in the woods. There isn't much nostalgia in it while you're living it. Several of the quotes from loggers presented here bear this out.

The generation who knew the Adirondacks before me speaks proudly of having known men like CJ Strife, Reverend Frank Reed, John E.

Johnston and J.P. Lewis. My peers and I can brag about knowing or having met J. Claude Lecours, Mart Allen, Frank Webb, Joe Lindsey, Bob O'Neill, George Mitchell and the like. I could name a few others, but it would date them cruelly. If you have the opportunity to meet the men and women in this book and their kind you will go forward with similar proud memories.

I have been fortunate enough to have many informative conversations with loggers and I have endeavored to understand their businesses. Their story is difficult to tell second hand, so it occurred to me that presenting photos of their work and quotes from them, coupled with discussions and commentary is a good way of conveying their work. Misconceptions people have about logging are usually due to a lack of information about them. This book tells the story of eight different forest enterprises, with many photos of their work.

I thank the eight business owners and their employees for their cooperation in allowing me to photograph and describe their work, as well as talking to me in many interviews. Joe Phaneuf edited this book and forced me to clarify and organize the messages in it, as did Alison Berry, who gave me a critical review of several drafts of this work. Eric Johnson took my text and photos and formatted them to make them look better than they are in the original edition. Mandy-Scott Bachelier has given the second edition a look that is beyond anything I imagined when I first started this work.

I am indebted to Mart Allen and Kerry Rogers for supplying two of the photos used in Chapter Two.

—Steve Bick
*Thendara, NY
September, 2014*



CHAPTER ONE

AT WORK IN THE WOODS

“In the woods we return to reason and faith.”

—Ralph Waldo Emerson

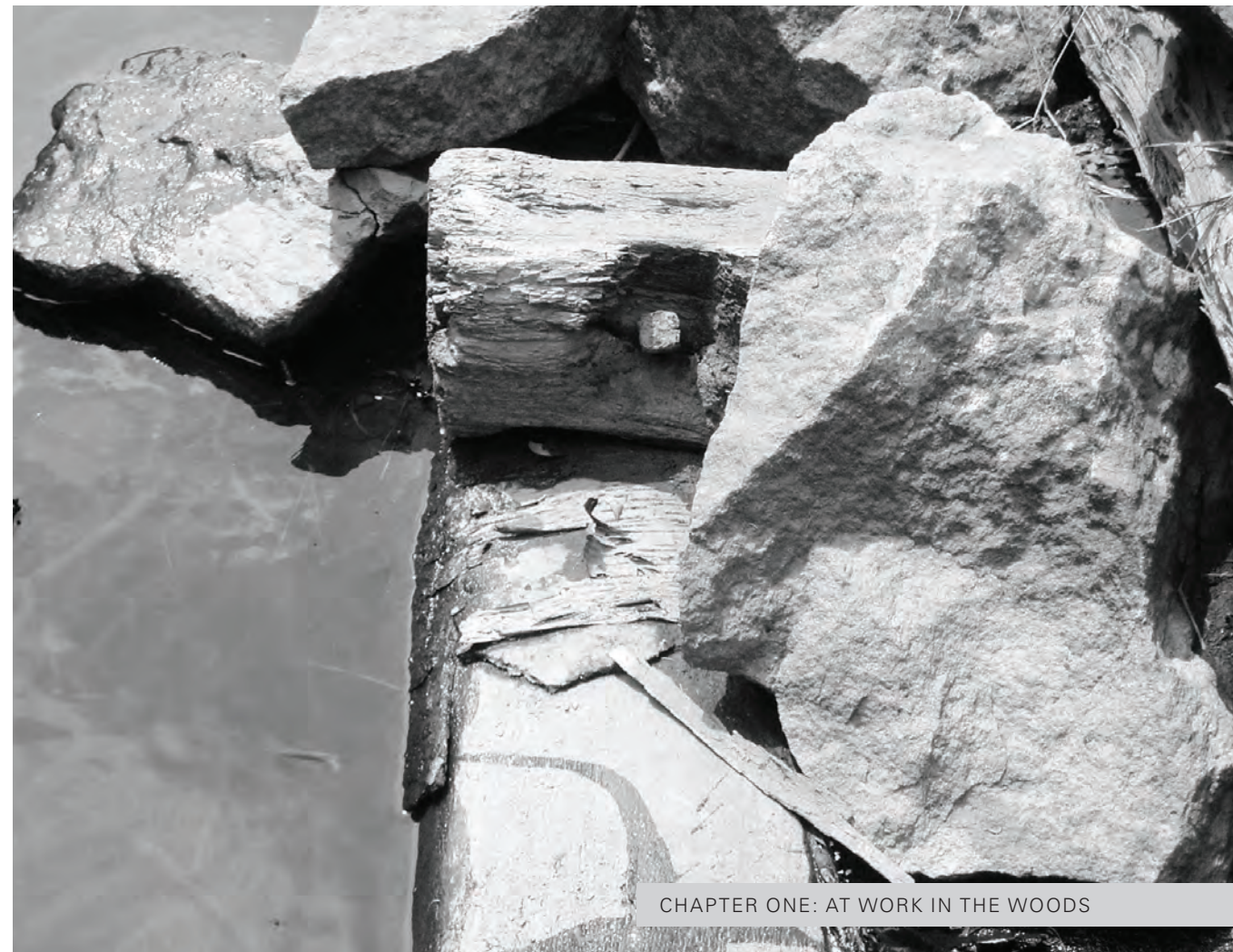


Enterprising small business owners are at work in the woods. While earlier generations called them lumbermen, today they are loggers. Present day loggers have identified a need for products or services they can supply from the forest. If you ask these loggers what they do, “work in the woods” is a standard reply. This simple phrase is a quick way to sum up an open air lifestyle of endless challenges and problem solving. Markets reward them for both the wood products they create and the care they take in protecting the land. While most of these enterprisers are attracted to this vocation because of the independence and outdoor aspects of the work, they have the same desire to make a living as any office-bound business person or main street merchant.

My perspective in telling their story is part objective observation and part commentary. I enjoy the opportunity to work with and observe these forest enterprises, but I’m not really one of them. As a forester, I work in the woods as well, but my livelihood does not depend on the same physical contact with the forest and its timber, water and soils. They sell piles of wood, I sell advice. With no significant investment in expensive equipment that is prone to breakdowns, I can leave to work in the office if the weather gets too bad. While it is difficult to photograph my daily production, I can document those of a forest enterprise with portraits of their equipment in motion, rivers bridged, problems solved and merchantable products on the landing.

Where there is a supply of timber and demands for the products that can be made from it, you will find a forest enterprise endeavoring to bridge the gap between the two. In New York’s Adirondacks and the surrounding region, privately owned forests grow timber that its owners may decide to harvest. The best way of harvesting this timber is dictated by the difficulties of the terrain, the desires of the forest owner and the regulations imposed by government agencies. Timber can be converted into products that are purchased by sawmills, pulp & paper mills, energy plants, and increasingly, directly by consumers.

A trammellers' footnote: This iron spike and blasted rock on a bridge site in the West Canada Lakes Wilderness Area are a testament to man’s past activities here. This land wasn’t so much spoiled as it was annotated with evidence to tell the story of industrious human interactions. Standing here, resting from a difficult walk from the roads of the Moose River Plains and flagging away unsuccessfully at deer flies, one can only admire the ingenuity and enterprise that enabled people to benefit from this land. ▼



By using the term “forest enterprise” I hope to create a greater appreciation for the work of loggers and raise their profile in the business community. While many admire the efforts of those who make a living from the forest, a negative image of logging persists in some people’s minds. This chapter builds upon an appreciation of the hard work in the woods by past generations and explains the diverse set of opportunities that shape the forest enterprises of today.

TRIED, TRAMMELED & TREED

The history of man’s logging in the Adirondacks is not so villainous as some believe and the evidence on the ground proves it. Early wilderness advocate Bob Marshall promoted the protection of land “untrammelled by man.” In light of this, it’s ironic how much of the working landscape has been acquired in the Adirondacks for the New York State Forest Preserve and designated as wilderness. In one sense, it is a testament to the resiliency of natural processes that evidence of man’s activities fade amid the sylvan march of forest growth. There is more forest land in the Northeast than there was 100 years ago, so perhaps we have learned that this early trammeling didn’t stand a chance against the dynamics of forest growth.

It is possible to earn a living from the forest and protect and steward it as the same time. Could it be that the trammellers of

long ago weren’t bent on the destruction of forests, but were instead motivated to supply demands for forest benefits? Should we view their successors in a similar light?

The contemporary view of the early lumbermen, with their driving dams, railroad spurs, and camps full of men and horses, alternates between condemning them as spoilers of the land and admiring them for their industry. As an undergraduate, I was taught that the Adirondacks had been “raped” by the lumbermen. This characterization would no doubt have surprised the supposed perpetrators, who were pursuing an honest living. Reverend Frank Reed travelled among them with his preaching and was moved to found the Northeastern Loggers’ Association on their behalf. He championed these men of the working forests, immortalizing them with his 1974 appearance on the Public Broadcasting Service to show his movie footage of early logging operations. Reed narrates in the background as his silent film runs, showing logjams on the river, lumber camp life and early Linn tractors. He discusses each lumberjack in turn and “his skill in his very important work.” The popular Lumberjack Sky Pilot DVD continues to introduce this movie footage to generations of new admirers.

Many of us learned to admire the fore-runners of today’s loggers while watching Reverend Reed’s early color movie of the last of the log drives on the Moose River in the

1940s. My own great-grandfather, an emigrant to this country from Quebec, took part in this lifestyle. He had his name tattooed on his arm so his body would be easy to identify if he had been crushed between logs on a river drive. While many things have changed since then, there is much to admire about present day logging.

A balsam fir tree grows up through an abandoned skidder tire at a remote location in Essex County. In the past the woods were often a convenient refuse site for items like this, discarded on the spot. Such practices have largely become a thing of the past and are frowned upon by responsible individuals. ▼



TREES FALL IN THE WOODS, BUT YOU DON'T HEAR THEM

Forest enterprisers are at work each day, but most of us don't know them or understand their work. These forest enterprises employ fewer people than in Reverend Reed's day and so they are less ingrained in the Adirondack region communities. Yesterday's timber towns now rely mainly on tourism for employment. As a result, there is a bigger deficit in understanding how these people make a living.

The reduction in our logging labor force is a social triumph—fewer people work in a safer environment to harvest as much or more timber than they have in the past. This timber is used more efficiently than it was in the past, with eager markets for most of the by-products created during processing. Economist Adam Smith demonstrated the benefits of efficient production over a labor intensive production process over 230 years ago and most of us are still trying to grasp that this freed up both capital and labor for other innovations. Consider this—one the greatest challenges faced by the modern logger (and other small businesses) is finding and hiring skilled workers. You won't find a single tent encampment of displaced woods workers, unable to find work.

The demand for forest products extends beyond the products themselves when consumers demand assurances about the

sustainability of the resource they came from. Forest owners and wood products consumers alike are requiring higher standards of protection of the land and water during harvesting operations. Voluntary best management practices (BMP's) for water quality have taken root around the country. These BMP's evolved out of the industry's efforts to regulate itself, in response to concerns about the environment. Loggers, foresters and public agencies worked together to document, compile and illustrate practical methods of building roads and trails, diverting surface run-off, crossing streams and protecting wetlands. Show a logger how to install one of these improvements and then next thing you know he show you a way to make it better. What began as voluntary standards have become accepted and expected practices among landowners, loggers and consumers.

The amount of money a logger needs to start a forest enterprise can be staggering, but this somehow escapes public notice. Invest this much money in a main street business in most Adirondack towns and the local newspaper will probably run a feature on you. Attend the New York State Woodsmen's Field Days and outfit yourself with a skidder (\$150,000), loader (\$60,000), slasher (\$25,000) and log truck (\$150,000) and the only people who know very much about it may be the equipment dealer and your banker (and boy, will you be popular with them!).

Loggers usually aren't self promoters on the local business scene. When their operation expands, you won't see a photo and blurb about it in the business section of the local tabloid. Loggers are too busy "just making it happen" as Tupper Lake logger Paul Mitchell puts it in *Chapter Seven*. Publications such as *The Northern Logger* monthly magazine (did you know it was published in the Adirondacks?) do a fine job of profiling these businesses, but this is largely for the appreciation of their peers.

An old yellow birch tree near the remote Pepperbox Wilderness Area shows the tell-tale signs of a visit by man. This birch was put to the test with a saw and found wanting. Many of these trees still stand today, hollow as a drum but with a massive, healthy top. I always enjoy encountering these massive yellow birches in the woods, often forming a super-canopy above all else. They remind me both of the resiliency of nature and the diligent efforts of past generations who worked in the woods. ▼



Loggers deserve to be respected as the entrepreneurs that they are. Most are reluctant to assert themselves as part of the local and regional business scene and so I will do it for them here. While it is tempting to many to fly under the radar, there is an undercurrent among them that there is a lack of appreciation for their work. Working for many Adirondack forest owners for the past twenty years and traveling around the eastern hardwood region for various logger-training efforts since 1996 has allowed me to interact with hundreds of these small business people. I've had my share of disagreements with some of them, but none of the disputes were about the legitimacy of what they do. I have yet to hear one of them apologize for being a logger, so I present to you here unapologetic images and descriptions of their work.

OWNERSHIP & MARKETS INSPIRE ENTERPRISE

Many of us pass trucks loaded with logs on the road on a regular basis. Have you ever wondered about the chain of events that put the truck in your sight line? Do you worry that the trees that were cut down to load those trucks might not be replaced? In our region trees grow back without replanting. Harvesting timber from a forest doesn't consume the land or undermine its ability to grow trees and well planned harvests are

intended to regenerate a new age class of trees. Landowners make the decisions to convert forest land to other uses—residential development, for example—not loggers. Logging as a forest enterprise requires a sustainable supply of available timber.

A true forest enterprise is one that relies on the sustainable bounty the forest supplies in the growth of timber. Timber refers to standing trees. Loggers harvest these trees and process them into products that they can sell. To do this, these small businesses must own or gain rights to enter and use these forests. Well defined property rights are essential to an environment that allows forest enterprises to spring up and flourish. One of the rights associated with ownership of land in New York State is the ability to sell or harvest timber.

Traditionally it was the logger who purchased this timber and then harvested it, converting it into products such as sawlogs that were sold to mills. This simple model has changed considerably over the past twenty or thirty years. Loggers still sometimes purchase timber (especially low value trees used to produce pulpwood and similar products), but many times the timber is purchased by a sawmill who then hire loggers to harvest it for them.

Some large landowners have taken control of the timber harvesting process by hiring loggers to cut the trees and convert

them into logs and other products. The landowner then markets these products. In this scenario, the logger is a service provider in much the same way as he is when working for a sawmill, but his payment comes instead from the landowner or its management company. Many of the timberland investment management organizations (TIMOs) and real estate investment trusts (REITs) that have supplanted the paper companies as forest owners in the Adirondacks follow this model.

In a marketplace where the best and most accessible timber is sold on a competitive basis to sawmills and large tracts of land are controlled by financial institutions, what enterprise is left to the logger? There are a number of options, each of which will be illustrated in subsequent chapters. Most operations are flexible enough to take on a little bit of each of these roles, as the

The entrance to the “Ways of the Woods” traveling exhibit is shown here at a forest industry trade show in northern Vermont. Sponsored by the Northern Forest Center, it does a good job of portraying various aspects of northern forest life. It's ironic that the entrance portrays loggers of yesteryear, while modern timber production and processing are a vital part of today's working landscape. ▼



opportunity arises. A brief overview of these opportunities follows.

Those who are caught completely between the landowners and the wood consuming mills are essentially service providers. Some loggers have chosen to specialize in high production levels and equipment mixes that guarantee them steady but low paying piece work. Location plays a role in this. While anyone could decide to move to a location that affords more opportunities, family and lifestyle considerations often overrule such moves. The Good Fellers chapter illustrates this service provider niche.

Rustification and North Lake Legacy introduce you to loggers aren't afraid to venture far from the paved roads to harvest timber. In some cases there is high quality timber that has risk factors associated with it in the form of poor accessibility, unstable ground conditions, unpredictable merchantability, or mixed with high concentrations of lower value stems. Such timber is of less interest to a typical sawmill. The mill would rather buy the roadside logs produced from this hard to reach timber and let someone else assume the risks associated with harvesting it. Both of the operations profiled in these chapters move beyond the expensive specialization needed for work on company lands, countering it with versatility.

Stands of lower value species, such as beech, are difficult to harvest profitably because of the lower rewards for the products

that can be produced from them. There is an abundance of such stands. This timber is still somewhat readily purchased by the logger, but the catch is that it is difficult to make a profit harvesting it. A few forest enterprises have found ways to make harvesting these stands worthwhile for all parties involved. In Forwarder Thinking you meet a man who is innovating a new equipment mix to the region to harvest such timber. Destined to Flail takes this a step farther by bringing a mobile factory to the job site and making a value added product from trees that few have wanted up until now.

From small and efficient to large and efficient, we move next to small and specialized. The other opportunity to purchase timber that some forest enterprises have capitalized on is in very small woodlots. There are often small volumes of high quality timber in close proximity to second homes, lakes or other features that the landowners hold dear. While these people would like to realize some income for their timber, they will only do it if low-impact harvesting techniques are used and visual resources are protected or improved. High quality logs can be readily sold, even in small quantities. Low quality timber inevitably comes along with it. In small quantities, finding ways to add value to this material through secondary processing is an essential part of the enterprise. Wood is Wonderful and Living on the [Woods'] Edge show how two loggers have focused on this specialty.

If owning the timber or land is one way of getting around being a service provider and owning a sawmill is another, why not do both? If doing both means that your by-products are bark and sawdust instead of cow manure, so much the better. Vertical Integration and Farm Work Emancipation shows how the O'Brien brothers made this transition.

If you are Stumped about what the forest provides, the following chapter is for you. In it you will see images and read descriptions of the forest, how we get to it, and the things it provides us. With this bit of background under your belt, enjoy each subsequent introduction to another forest enterprise in the chapters that follow.

A sign of the times. This welcome to Tupper Lake sign greets you as you enter the town from the East on State Route 3. The lumberjack logo above the sign is symbolic of the annual Tupper Lakes Woodsmen's Days, held annually in July. A more recent addition to the sign is the banner at the bottom, proclaiming that Tupper Lake is the "Home of the Wild Center", a new Adirondack natural history museum. Tupper Lake is probably the foremost timber town in New York State, but even here tourism and outside appreciation for the natural environment play an increasingly important role, perhaps displacing traditional dependence on the working landscape. ▼





CHAPTER TWO

STUMPED

“Conservation is a state of harmony
between men and land.”

—Aldo Leopold



This chapter explains a host of forest benefits and the traditions, markets and methods that help us own and manage them. A forest provides a variety of pleasant experiences, wood products and ecosystem services. Many people may use or enjoy the same forest for different things at different times. While all forests do not provide everything for everybody, over time a well managed forest may provide a sustained flow of the things we use or admire from nature, satisfying a wide range of interests.



A stump is evidence of both a tree's longevity and its continued enjoyment by consumers of wood products. These stumps were cut from beech tree stumps. Most of these trees were about 80 years old. The trees provided a closed canopy for the enjoyment of a local hunting club for many years. Periodic mast crops of beech nuts fed many species of wildlife, including the wild turkeys that have repopulated the area over the past 20 years. The trees were cut in 2007 to provide openings in the forest for the regeneration of a new age

class of trees. The consumer products that came from harvesting these trees are paper and electricity. Most of the wood from these trees went to the International Paper Company mill in Ticonderoga, New York, with the remainder going to the Lyonsdale Energy plant. A year later, wood from a similar operation on this property was in demand by two additional paper mills and a wood pellet plant. Competition for low-value forest products bodes well for forestry in the Adirondacks.

Roads are the key to many of the benefits that come to us from the forest. This road on the Webb Community Forest was designed and constructed by trails foreman Tim Pylman in 2006. Roads allow forest products to be harvested and trucked away and provide access for a host of amenity benefits.

A well constructed forest road will be crowned for horizontal drainage and ditched for vertical drainage. Adequate cross-drainage must be included, usually in the form of culverts. The most common mistake in road building is using culverts that are too small. Resource managers are prompted to correct this shortcoming before the inevitable washouts that ensue.



Forest roads require maintenance. Jamie Roblee poses here with his Kubota tractor. Much of Roblee's excavation business involves maintaining woods roads for landowners in the central Adirondacks. The enclosed cab on this machine protects him from hordes of black flies, deer flies and mosquitoes. The blade on the tractor's three point hitch allows him to grade this narrow road. Most light duty gravel roads should be graded once each year. He can attach a York rake to this tractor. Raking the road combs out the washboard effect caused by rain and use of the road.



While these signs might not seem neighborly, excludability is one of the things that make forest land valuable for many purposes. Such signs are common site in the region. This one reads "Posted; Private Property; Hunting, Fishing, Trapping or Trespassing for any Purpose is Strictly Forbidden; Violators will be Prosecuted."

If the owners were unable to prevent others from entering their property to cut and remove trees, pick berries, hunt or even hike around, the land would be valued differently.

In New York State, legally posting land against trespass requires posting signs such as this one "on or about every 660 feet." In practice, landowners often place these signs much closer together, especially along road frontage or common boundaries with public land. The landowner has the least amount of liability for losses or accidents by trespassers. The absence of such signs should not be construed as an invitation to enter or use the property.



Gates are one of the keys to excludability and protection of private forest resources. This gate is well sited directly in front of a large culvert, precluding any possibility of driving around it. Seasonal exclusion protects the road bed from damage. Operational exclusion is sometimes used during timber harvesting to prevent accidents by unskilled drivers on these narrow roads. Outright exclusion of non-owners simply protects the quiet enjoyment of forest properties by their owners. There is a long tradition of all of these types of exclusions in the Adirondacks.



Hardwood pulpwood is an abundant but low valued component of many forests in the region. Pulpwood is sold by the cord or by the ton. These short stems, or bolts, are cut to uniform lengths, usually eight feet long. Various hardwood species are mixed together for this type of pulpwood. The bolts in the photo are all beech. Beech makes up a large portion of the hardwood pulpwood cut in the Adirondacks, because it is an abundant, low value species. Prone to disease, it is often desirable to remove it from a forest stand.

Delivered to the mill, this small pile is worth about \$35. The nine bolts above represent about 0.5 cords or 1.25 tons.

Trucking the wood to the mill eats up approximately half this value. By the time harvesting costs (felling, skidding, & bucking) are factored in, there is \$2.50 left over to pay the landowner for the trees that were harvested to produce this small pile of pulpwood.

Clearly, pulpwood must be produced efficiently if the forest enterprise is to make money from it. There are currently two markets for hardwood pulpwood from the Adirondacks. Sellers are price takers, with no real power to negotiate. Wood energy markets are slowly beginning to come online in the region, providing more competition for this type of material.

Soft maple is among the most abundant species in the Adirondacks. Purists will refer to this as red maple, but the marketplace labels it soft maple, in part to distinguish from the much more desirable hard (sugar) maple. It is prone to discoloration and defects that subtract from the amount of lumber yielded in the sawing process. It is a lesser-valued species but one that nevertheless is an important part of the production mix for various forest products firms.

This log was sold for approximately \$35 and was trucked away by the purchaser. It is 14 inches in diameter and 14 feet long. Note the large amount of heartwood and how the heart is misshapen. These factors detract from its value. Factoring in production costs and profit for the purchaser of the tree, the landowner might receive as much as \$10 to \$15 for this log.

While most of the value in timber production in the Adirondack region is concentrated in a small percentage of the timber, most of the volume is concentrated in lesser value products such as this soft maple and the pulpwood on the previous page. It's often said that 25 percent of the volume contains 75 percent of the value and vice versa.



Black cherry is a very valuable species. While cherry is an important species in the Adirondacks, it represents a relatively small percentage of overall stocking. This log was sold for approximately \$400 and trucked away by the purchaser. Factoring in production costs and profit for the purchaser of the tree, the landowner might receive as much as \$340 of this \$400 log sales value. It's important to understand that for every high value log that yields this sort of revenue, there are probably twenty or so lesser valued logs such as one described on the previous page.

Careful log bucking practices and marketing are needed to recover the maximum value potential of high quality logs. Unlike pulpwood, where each stick has the same value per unit, sawlogs and veneer logs are graded based on their size and quality attributes, with better grades paying higher prices. These logs have many suitors and the markets for them are usually competitive. With this in mind, considerable effort should go towards bucking logs to market standards and finding the most lucrative markets for them.





Portable bandsaws such as the Wood-Mizer shown here are increasingly common in the northeast. While many of these mills belong to hobbyists and do-it-yourself types, they are central to the livelihood of others. Some loggers have purchased them as a means of adding value to some of the wood they harvest, as well as keeping busy during mud seasons when they are not actively harvesting wood.

This mill is sawing a birdseye hard maple log to be used in custom cabinets for a new home. Birdseye is a rare phenomena that occurs in some sugar maple trees. Small indentations in the growth rings of the tree literally resemble a bird's eyeball.

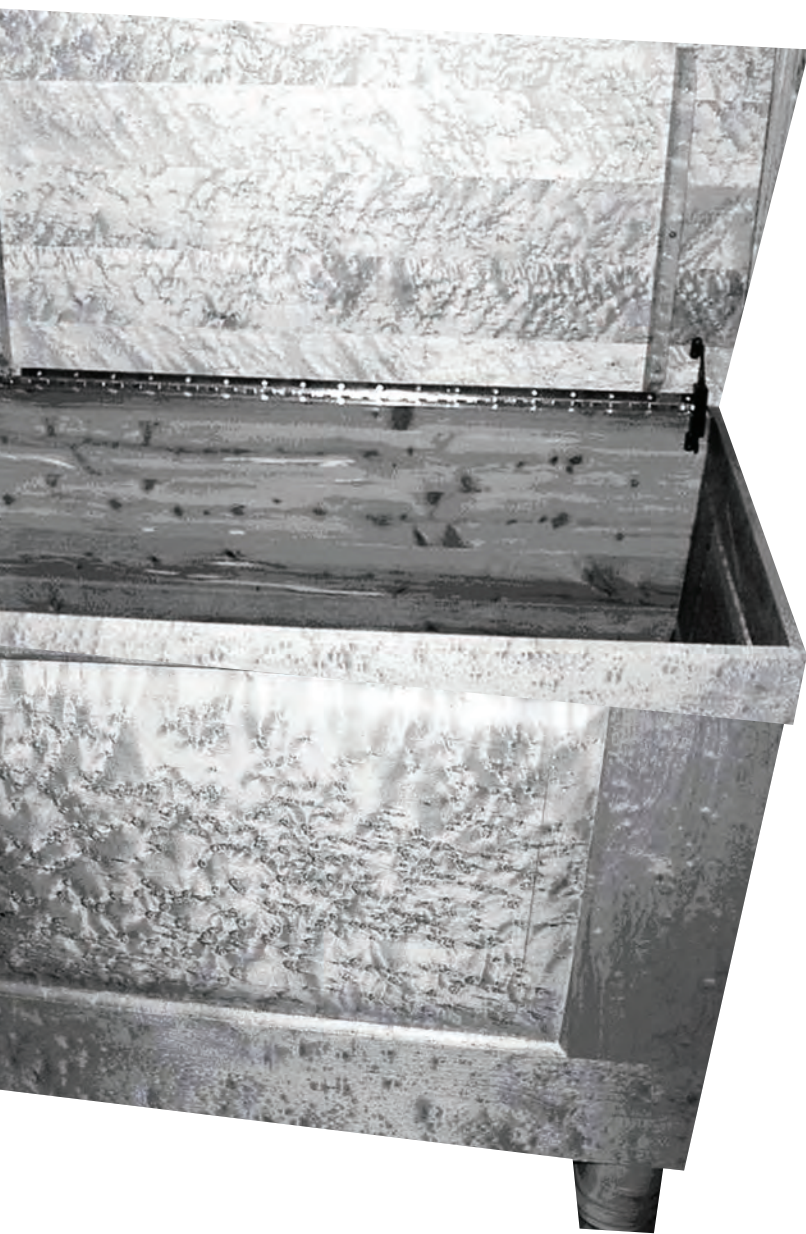
Consider that a logger may own \$300,000 worth of logging equipment that enables him to convert white pine sawtimber, purchased for 10 cents per board-foot, into white pine sawlogs, sold for 30 cents per board-foot. The addition of a \$20,000 portable bandsaw allows him to convert the 30 cents per board-foot white pine sawlogs, into 60 cents per board-foot lumber. One drawback to this activity is that it requires a considerable investment of time (or scarce skilled labor) that might be needed elsewhere.

Small, low grade hardwood sawlogs are another prime candidate for value added processing with a portable bandsaw. Such logs sell for little more than their production cost to larger sawmills, because sawing them can be an inefficient process. A small hardwood log full of defects can yield some FAS (first and second grade) lumber that can be further processed or sold at a retail price to consumers for several times the original value of the log.



Forested landscapes are high quality watersheds that provide water for many public and private benefits. In recent years great emphasis has been placed on voluntary best management practices for water quality and stricter enforcement of stream crossing permits by the New York State Department of Environmental Conservation. The water belongs to all of us, meaning that none of us have the right to pollute it.

Credit is due to various members of the Adirondack forestry community for the widespread voluntary adoption of best management practices over the past ten years. New York State Forest Rangers have done a great deal toward introducing these practices when issuing stream crossing permits. Since innovation and adoption happens at the ground level, forest enterprisers deserve a large share of the credit for applying and improving these practices around streams and wetlands.



This attractive birdseye maple blanket chest was built by Long Lake craftsman Vern Javes from locally produced lumber.



Specialty forest products such as birdseye maple often find their way to the highest value end user.





Many of the large tracts of land in the Adirondacks are owned as private retreats. The people who own these parks will often value the aesthetic appeal of a dead spiraled tree like the one in this photo as an essential part of their summer enjoyment. Such owners often turn to timber management when the burden of property taxes poses a threat to their ability to keep the land in the family. If there is art in forestry it comes from balancing the importance of scenes such as this one with the practical need to harvest timber to provide sustaining revenue.

Forest harvesting operations have the potential to harm the land and associated resources, but proper care can prevent such damage. The rutted ground in the photo leads directly into a trout stream, which was crossed with no provision to prevent sedimentation. Best management practices for water quality call for minimizing stream crossings, careful selection of crossing sites, selecting appropriate equipment and suitable weather conditions.

This stream was crossed in three different locations along an 800' stretch. Not surprisingly, this entire operation involved

the theft of timber from an absentee landowner by a 70 year old career timber thief.

The true forest enterpriser treats anyone who would do this with open contempt. There is an unfortunate tendency for the public to lump all timber harvesters together and judge them by the worst examples they encounter. Honest men see timber thieves and careless treatment of land as a threat to their livelihoods and have nothing but disdain for the perpetrators.

The conscientious work of a few individuals got the culprit behind this disaster booted out of the New York State Timber Producer's Association.



Funding for schools from property taxes on forest land is an important benefit to many communities. Private forest owners pay property taxes and the State of New York makes a payment in lieu of taxes for publicly owned Forest Preserve lands. In both cases, the forest is not sending any children to school, making this “free” money for the local school district. The money is free in the sense that no additional services need to be offered.

The benefit in this case is not so much to the school district, but to the other taxpayers in the community. The school district sets budget and usually ends up with voter approval for it. The tax money from forestland requiring no services tends to offset the amount that the other taxpayers would otherwise have to pay to keep the school operating.



A viable forest economy serves to protect watersheds. High quality watersheds yield all sorts of benefits, including an occasional day of fishing for native brook trout.



CHAPTER THREE

GOOD FELLERS

“Hard work spotlights the character of people:
some turn up their sleeves, some turn up their noses,
and some don’t turn up at all.”

—Sam Ewing

“It’s perceived that loggers are getting rich—and it’s just barely survival.”

—John Levi II



Levi Lumber Company, Levi Lumber & Logging, Levi Excavating, Levi Building Supplies and, up until a few years ago, Payne & Levi. Many names and multiple businesses, but only one family. John Levi and partner Sid Payne started Payne & Levi in 1961 to support their growing families. Sid retired in 1997 and John and his wife Lynda continued on in this business. Today the business is in transition from father to sons. John, John II, Dan and Jerry are known around the Adirondacks as “good fellers.”

The single biggest piece of this enterprise is the logging operation. Like many long-time logging operations, the Levis have had several incarnations in size and specialties, including having operated a sawmill for many years. At present they are primarily contract loggers who produce logs, pulpwood and chips on the Lyme Timber Company lands under a service contract. Contract loggers work on very low margins and must strive for high efficiency and high production rates.



“This is the fourth time we have been on this landing in twenty years.”

—John Levi II

An overview of one of the Levi’s landing sites on Lyme Timber Company lands in February 2008. The entire production site encompasses the full extent of the harvesting site, culminating with the processing of trees and loading of products on this landing. The Levi’s garage and yard in Inlet serve as further support for this operation.

It is here at the landing where trees are processed into various products—intermediate products in a larger chain of production that results in consumer goods. Subsequent pages will explain the production process followed by this company.



The operator's view from the cab of the feller buncher (note that "keep back 300 feet" is painted on the boom). An inset view in the upper left shows the cab itself. Dan Levi usually operates this machine.

From the safety of his seat in the climate-controlled cab, he can reach out approximately 24 feet to grab and hold a tree stem while the circular saw head severs it from the stump. Dan can process up to 1,000 trees in a single day, if the stand prescription calls for a small clear-cut. Alternatively, he might handle as few as 80 in a stand marked for a single tree selection harvest. This machine can lift and move most of the trees they encounter on company lands. Dan is able to control the fall of occasional larger trees, if not lift them upright and move them around. After cutting the tree, it is "bunched" into a pile with other stems. The operator of this machine has limited ability to see people nearby on foot, so extreme caution must be exercised by any visitors to the harvesting site.

"Can you tell where we've cut?"

—John Levi II

Dan Levi pulls a hitch of hardwood trees with their Timberjack grapple skidder. A grapple skidder works well in combination with a feller buncher because the trees are grouped together after they are felled. This skidder backs up to the pile and grabs the butt end of the bunched trees with the grapple before pulling them to the landing. The Levis typically employ two skidders in their operation, though shortcoming in the local labor supply often leave one skidder idled.

On this particular site, the Levis were salvaging timber in a stand that has been heavily damaged with windthrow. Such operations aren't particularly productive, but often come as part of a larger package of work on company lands.



“This line of work is very repetitious and a lot of people can’t deal with that. You come to work and you are doing the same thing day after day after day. It’s like an outdoor factory.”

—John Levi II

John Levi II poses for a moment next to the grapple skidder, while Dan Levi climbs back into the cab in preparation for another round trip to pick up trees. The repetitive nature of this business works to my advantage during a visit to the site—brothers John and Dan were happy to take a break and answer my questions.

The large chains on the skidder’s four rubber tires are essential for operating in the difficult Adirondacks’ terrain. Skidder tires and chains eventually wear out and must be replaced. This machine typically needs a new set every two years or so, at a cost of \$10,000.



Innovation and adaptation are important principles in logging. This old camper was altered by John Levi to house a generator. This arrangement makes the generator mobile and protects it from the elements. The generator runs on subzero nights during the long Adirondack winter, with long extension cords used to power block heaters for the various pieces of equipment on the log landing. Diesel engines are slow to start in cold weather. Heating the engine blocks ensure that things start quickly when work begins for the day, preventing loss of productive work time.



A John Deere stroke delimber is used to remove the branches from tree stems. Whole trees are brought to the log landing by the grapple skidder. This is an essential aspect of a mechanized logging process. In the past, trees had to be limbed by hand with a chainsaw after they were felled. This was time consuming and potentially dangerous. Jerry Levi can remove all of the branches from a tree in 15 seconds or less, preparing it for processing into roundwood products by the slasher. The tree branches and other debris, called slash, can then be taken back into the woods to fill in soft spots in the skidder trail, or, alternatively, processed into low-value biomass products.

A Husqvarna chainsaw sits idly on the Levi landing. Chainsaws, in combination with cable skidders, were once a central piece of equipment to any timber harvesting operation. Chainsaws can be used for felling, limbing and bucking, but a great deal of labor must accompany them to achieve the production levels needed in contract logging. The combination of a feller buncher, stroke delimber and slasher supplant manpower and chainsaws. Chainsaw enthusiasts need not fear that they will disappear entirely, as there is always a need for them, even if it just to block up firewood and clear wind-thrown trees on the drive to the job site.

Husqvarna is probably the most popular brand of chainsaw among loggers in the Adirondacks, with Stihl a distant second. No other brands need apply.



“Everything has gone up except for pay.”

— Dan Levi

John Levi II loads a trailer with eight foot sticks of pulpwood for the International Paper Company mill in Ticonderoga. A load of this hardwood pulpwood weighs approximately 40 tons. Pulpwood represents the greatest volume of the Levi’s production over the past several years, supplemented with lesser volumes of hardwood and softwood sawlogs. When production is in full swing they will produce 10–12 trailer loads each week.

The IP mill in Ticonderoga is about a 240 mile round trip from the Lyme Timber Company lands near Big Moose, taking seven to eight hours for a round trip. The truck consumes 70 gallons of fuel for each trip. At the current costs per gallon for diesel, this amounts \$350 just for the fuel. Adding in labor, repairs and maintenance and depreciation, it costs more to truck the wood than it does to harvest it.



“Is the logger supposed to just be a robot?
Is the logger not supposed to have a family life?”

—John Levi II

This old school bus is a familiar site on the Levi landing. It houses spare parts, welding equipment, tools and a small break room, warmed by a kerosene heater. With each family member spending much of the day in an equipment cab, an occasional break or lunch time in the bus provides an opportunity to discuss work plans.

In the past, many old buses were altered in a similar manner, some with bunks for overnight stays on the job site. The families of today’s loggers expect them to return home each night. There is some irony in the fact that hard work and long days are needed to keep a family business afloat, but the same qualities that commit the Levi brothers to a family business also bind them to spending as much time as they can with their own families. Cooperation among the brothers is the key to accommodating both aspects of family life.

A fuel tank is chained to the blade of one of the skidders. Loggers improvise in their quest for efficiency. The slow moving, tracked feller buncher is often operating a considerable distance from the log landing. Driving it back to the landing at the end of the day for refueling is expensive and counterproductive. The skidder makes frequent trips between the log landing and the area where the feller buncher is operating. There is a significant savings of fuel and time from strapping this fuel tank on the blade and driving it to the feller buncher for refueling. A small electric pump is powered by a temporary clip on connection to the skidder's battery.



A sign on the Lyme Timber Company's lands reminds snowmobilers to stay off of plowed roads. Log trucks have the right of way and safety dictates keeping log trucks and snowmobiles separated as much as possible.

Most of the Levi family's work is centered on this multiple use forest. The property accommodates many recreational uses, including portions of the Town of Webb's renowned snowmobile trail network.





A load of firewood blocks sits on the Levi's small dump truck, awaiting delivery to a more civilized locale at the end of the day. When production costs and payment rates are examined closely, this firewood probably yields the highest return per ton to the Levi operation of any product leaving the landing. Selling a daily load of firewood blocks helps supplement the bottom line.

With the steady upward march of heating costs, there is a ready market for blocks and an even greater one for split wood—both green and seasoned. On straight comparison of BTU's, a heating oil price of \$4.50 per gallon is the equivalent of \$599 per standard cord of firewood (a standard cord is all of the wood that can be stacked in 128 cubic feet of space). The market price of a standard cord of firewood is far less than this, making wood heat a bargain.

A hunting camp sits on a leased site on the Lyme Timber Company lands, not far from where the Levi family was logging during the winter of 2008. Such camps are part of the neighborhood and part of the local culture.

During International Paper Company's tenure as the owner of this land, many clubs and individuals leased the exclusive hunting and fishing rights to large tracts.

The conservation easement that was sold to New York State in connection with Lyme Timber's acquisition of this land altered the leasing arrangements in many places. Clubs and individuals can still lease specific sites to build or maintain their camps, but there is broad public access to the rest of the land base for outdoor recreation pursuits. Active harvesting sites are closed to recreation for safety reasons.





Steel from an old building awaits new life in the Levi yard. John Levi was doing practical recycling on a large scale long before it became fashionable. Having the equipment needed to move large objects, loggers will jump at the opportunity to transport and store an item of this type. Even when there is no immediate need for it, John knows with great certainty that an opportunity or urgent need for this steel is waiting on the horizon. These beams could be employed in building a bridge or erecting a building of some sort.



Jerry (above) and Dan (below) perform routine maintenance on the chain of their stroke delimber, while their uncle, John Townsend, cleans the boom.

This work typically takes place at the Levi yard in Inlet during the spring mud season. Most loggers spend a good bit of the mud season on repairs and maintenance, getting equipment ready for the eventual return to work after the woods and roads dry out enough to support logging operations. By some estimates, repairs and maintenance cost an amount equal to 40 percent of the depreciation on a piece of equipment—no small sum.

Mud season can be a challenging time for logging contractors. If employees are laid off due to lack of work, they may have found other jobs before the employer is ready to hire them back. Most loggers try to have enough work lined up for these non-productive times to keep their employees on the payroll.



“We’ve considered going back into chipping.”

—John Levi II
February 2008

By July of 2008 Levi Lumber was back in the chipping business. After careful consideration during the spring of the year, a decision was made to purchase a used whole tree chipper. This decision was spurred by a several factors. Under their previous harvesting configuration, whole trees were skidded out the landing, delimbed and then the tops were cut off with the slasher. These tops were hauled back into the woods by the grapple skidder. Non-merchantable material was being handled twice, with no return to show for it. Now the tree tops (and some-

times the entire tree) go through the chipper, producing a merchantable product.

Another factor weighing in favor of the chipper is the shorter round trip to the Lyon-sdale Energy Plant. This is a much easier run than the longer round trip to Ticonderoga. With a limited labor supply and a fixed number of hours in each day, a shorter truck-ing distance made too much sense to ignore.

The recent addition of a whole-tree chipper to the operation leaves the future of the stroke delimber shown on an earlier page in doubt.

A chipping van backed into place near the chute on the whole tree chipper. The chipper operator (John II) grabs one or more low-quality tree stems with the loader and feeds the butt end into the chipper, which sprays green wood chips into the back of the van. It takes about 45 minutes to fill the trailer with approximately 40 tons of wood chips. This trailer has a canvas covered top and a low-lying bed between the wheels to accommodate more chips than a conventional trailer. Their goal is to produce three trailer loads of wood chips each day.

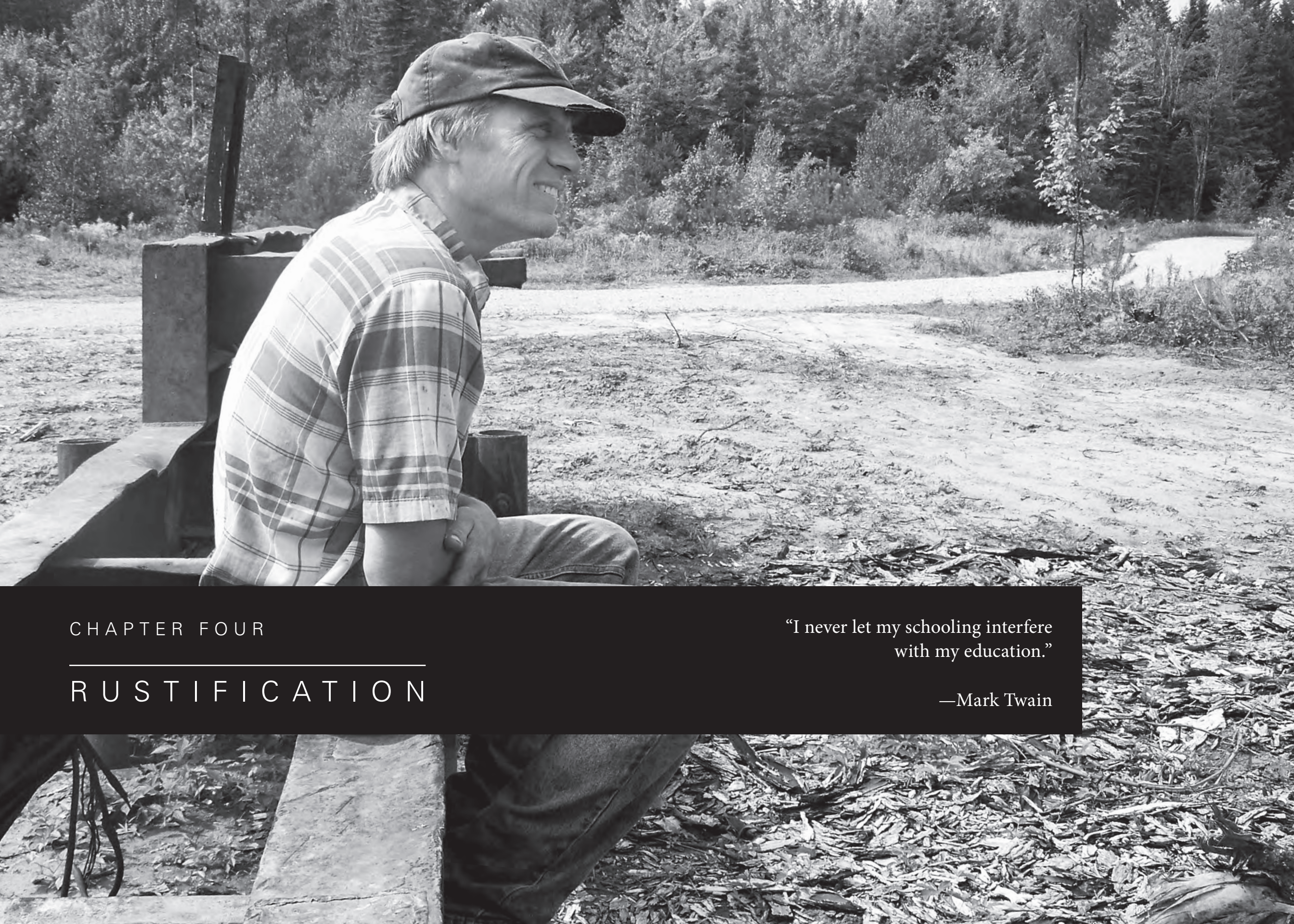


When the manufacturer of one of their most essential pieces of equipment advertises “DANGER” on it in big letters, it’s tough to argue with John’s assessment of risk. While Levi Lumber works on the transfer ownership of a family business between two generations, it is difficult to ignore the realities of increasing costs that they face on a daily basis. The only certainty the future holds for the Levis is the need to continually adapt to changes outside their control.

“The only people that bear risk in this industry are the loggers.”

—John Levi II





CHAPTER FOUR

RUSTIFICATION

“I never let my schooling interfere
with my education.”

—Mark Twain

“Well, there wasn’t a whole lot to do, in my area, with my education, other than farming, so I started logging it.”

Francis VanAlstine looks at a pile of popple (aspen) and spruce that he has cut down in the southern Adirondacks. His story is similar to that of many of his Lewis County colleagues, whose lack of options funneled them toward a career in logging.



Francis VanAlstine and his somewhat rusty equipment set up for a winter job on a private park in the central Adirondacks. VanAlstine hails from Lyons Falls, New York. A rusty metal sign proclaims “VanAlstine Headquarters” on the entrance to the equipment yard he shares with his father’s trucking and excavation business. VanAlstine has a wide array of equipment, all of it old. I used to joke that the only thing he bought new was fuel, but he located a few hundred gallons of old diesel fuel in 55 gallon drums and talked a man he bought a piece of equipment from to throw it in as part of the deal.

In David Beetle’s classic Adirondack history book, *Up Old Forge Way*, he wrote about Brandreth Park and how its members had been “rusticating” since 1852. VanAlstine has cut timber there and on several other parks. His resourcefulness and regard for the land are in keeping with the needs of the owners of such properties.

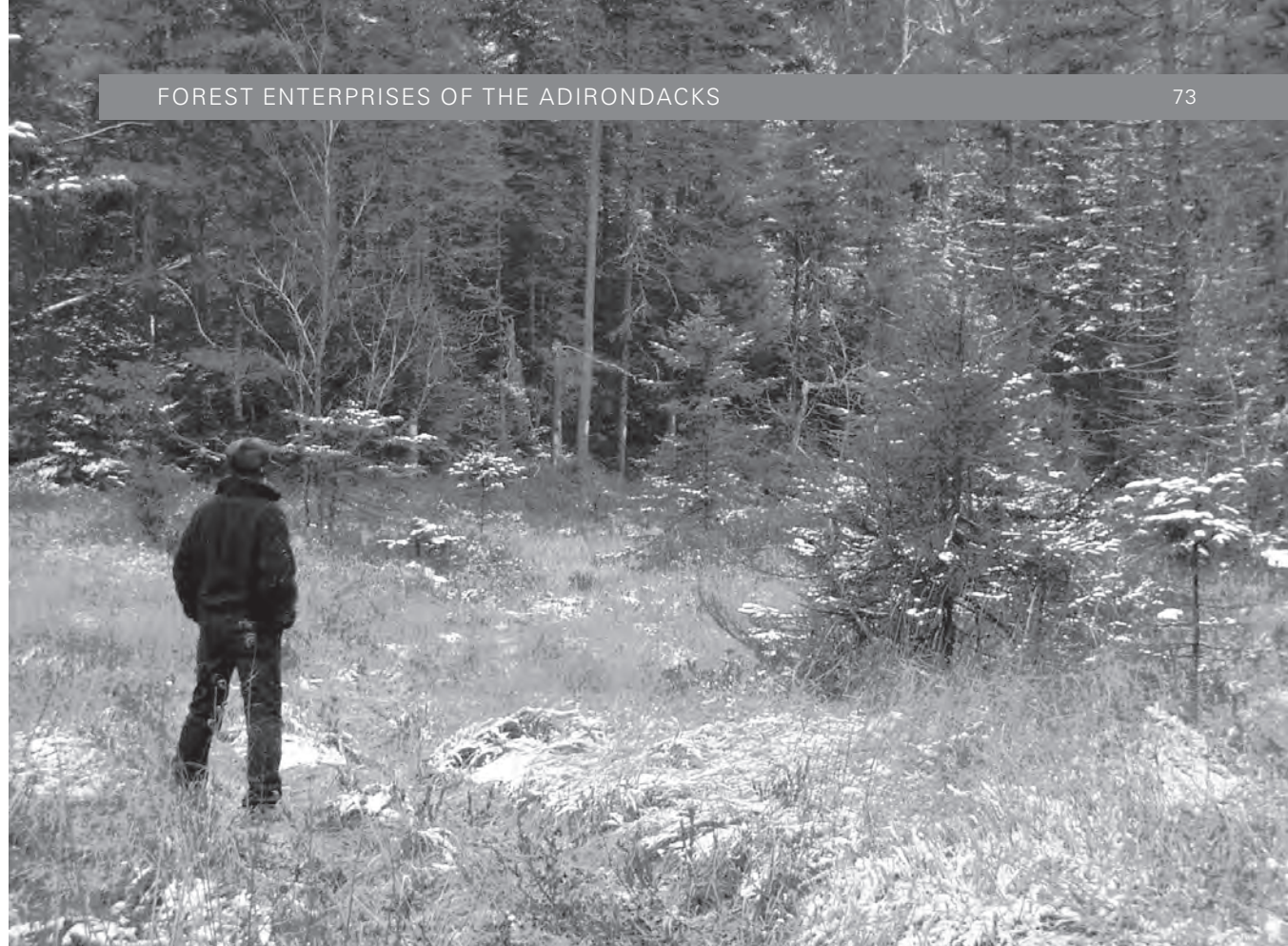
Versatility is one of VanAlstine’s strengths. He has a wide range of older equipment. This old equipment is less expensive than new purchases, but it also tends to need more in the way of repairs and maintenance. He is up for any logging job that comes along. This sometimes means pulling one of his machines out of the weeds and spending the weekend fixing it up to get it ready to start the job. When these machines are unneeded, they are parked in the yard, incurring no expense except a modest amount of depreciation.



“New would be nice.”

One of VanAlstine’s older cable skidders, with tire chains for winter traction, is used here to pull out a hard maple stem. While Francis readily admits that “new would be nice”, he follows the “easy to buy but hard to pay for” school of thought when it comes to brand new equipment. This has been a common philosophy among some loggers. With most logging equipment designed for other landscapes, such as the southeastern US, finding the right piece of equipment in the northeast is often a case of trial and error. Buying a brand new piece of equipment, before it has been proven here over time, is often viewed as “jumping in with both feet”. VanAlstine is innovative in his methods and repairs, if not in his equipment selection.

“I can afford it. I can work on it, usually, when it breaks. You get something with a lot of electronics and computers, its kind of a shot in the dark when you got to fix it.”



VanAlstine contemplates how to freeze a skidder trail across a wetland on a remote Adirondack property. Francis specializes in logging on environmentally sensitive and hard to get to sites. With the right combination of snow, cold weather and backwoods know how, he can protect both the land and his equipment on a site like this. His challenge is to turn a profit while keeping the landowners happy, complying with various regulations and preventing unnecessary wear and tear on this equipment. If something is rough on the land, it usually rough on the logging equipment as well.

A carefully frozen winter road leads into one of VanAlstine's winter job sites. It would be uneconomical to build gravel roads into many remote locations for harvesting timber, so the ground is smoothed out and frozen in place to support trucks. A road drag helps smooth the roadway and mix topsoil with snow, driving the frost deeper into the ground. A well frozen winter road makes for a smooth ride that rivals blacktop. In addition to accommodating log trucks, winter roads are often used to move materials in for recreational improvements, such as hunting cabins and even lime to buffer lakes and ponds against the effects of acid deposition.

This road drag is made from 100 percent recycled material. The steel supports from an old bridge have found new life in helping to smooth and freeze winter roads. The drag is pulled behind the skidder each time new snow falls until the road is frozen in place. A large snow build up would prevent the frost from going deep into the ground. Pulling this drag is less expensive than bulldozing the road in place.



Everyday glory—Francis buried his D7 bulldozer (circa 1956 for the frame, 1948 for the engine) while roughing in a road for the following winter's work. Such mishaps are common to loggers and he takes it in stride, carefully hooking a cable from the winch on his skidder to pull it out. The repair rates on logging equipment are considerably higher than those for comparable pieces of equipment, such as those used for excavating. On this \$2,000 bulldozer, the cost of repairs and maintenance are significantly higher than the depreciation.



Francis assembles a portable bridge across the North Branch of the Moose River, with the help of Clint Carpenter. Hemlock logs were placed in the river bed and then long stringers were placed over them to support the bridge deck. Deck sections were put in place one at a time. Note that the stringers supporting the decking are spaced to fall beneath the skidder's wheels. This ensures the least amount of wear and tear on the deck and decreases the likelihood the bridge will fail.



A temporary truck bridge affords access across a small Adirondack stream. Francis obtained a permit to put it in place for the winter from a New York State Forest Ranger. The stream bottom is gravel on this site, making it ideal to support the weight of the bridge and truck. Poles were placed on the stream bottom and then the metal bridge sections were put in place. The metal decking was salvaged from a bridge across a town road that was being replaced. The approaches to the bridge are frozen in place. In this way, no sediment is allowed to enter the stream during the course of the bridge's use. At the end of the job the bridge and poles are removed and the banks are seeded and stabilized. VanAlstine's careful attention to water quality issues has earned him a good reputation among the New York State Forest Rangers and brought a lot of logging opportunities his way.



Clint Carpenter and Francis VanAlstine stand still long enough for a photo, while putting a portable bridge in place on the North Branch of the Moose River. These guys wear wool like a fish wears scales. This bridge was put in place on an old log driving dam site with a solid gravel bottom to bear the weight of machinery. It required permits from both the New York State Department of Environmental Conservation and the Adirondack Park Agency.



VanAlstine watches carefully as his father pulls his low-boy trailer and wide skidder across a narrow bridge. Carefully protecting the improvements on private property makes an essential contribution to being asked back from one year to the next. This is especially true for shared resources, such as this bridge. Serious damage to this bridge would mean seven landowners would be unable to reach their property and a few of them might be unable to drive out.





Some logs, such as this hard maple, are hollow. Francis saves these hollow logs to use as sluice pipes in winter roads and skidder trails. The forest stand this tree came from has an uncommonly high number of hollow trees. Some are left standing to benefit wildlife. Others are felled but left in the woods, to provide horizontal cavities for some wildlife species.



VanAlstine sweeps the snow off of some hardwood logs he has laid out for inspection. Most of his valuable hardwood logs are sold under a competitive bid process. The logs are sorted by species and prospective buyers are invited to submit a lump-sum bid for each species. This process has proven successful, as there are often different high bidders for each species. Over the course of three or four bidding sessions each winter, the high bidder for a species in one session is often supplanted by another the next time around.

The log bidding process is a convenient way to take advantage of the competitive markets for hardwoods, but at the same time retain full control of the quality of harvesting operations. In contrast, high bidders for lump-sum sales of standing timber sometimes try to save money with low rates for harvesting contractors. The logger who is paid a low rate to harvest the timber has many incentives to cut corners.

Finding summer work has long been a challenge for loggers. Most of the valuable hardwoods that VanAlstine has worked in during the winter months are unavailable in the summer, due to accessibility issues and potential conflicts with recreational uses. Several years ago he purchased a used whole tree chipper in need of repairs. This chipper allows him to focus on lower grades of timber in the summer. His low cost basis in the chipper allows him to idle it for much of the year, though he must spend a significant amount of time on repairs and maintenance when he operates it. Overall, this chipper adds to his versatility.

The larch logs in the foreground above have a low per unit value, but came from a plantation in which average daily harvesting production is fairly high. The tops of the trees were put through the chipper, along with some lower value hardwoods that were harvested nearby. Some of the larch logs were sold to small mills for local uses, while still others were sold to the Commonwealth plywood plant in Whitehall, New York for use in making plywood.



Sawdust flies as VanAlstine runs his newest piece of equipment—an old sawmill he has refurbished to working condition. Purchased for \$3,000, it was hard to believe this mill would ever be in operation when I watched him load it on his truck. A few months later he had it up and running. His original intention was to use it to saw lumber for the new house he was building. The long carriage on this sawmill will accommodate a 30 feet long log. With this in his arsenal, some of the softwood logs he has been selling to other mills can be sawn, providing additional income opportunities when weather or ground conditions keep him out of the woods.



“There’s no plywood in this house.”

VanAlstine’s new mixed-wood mansion sits on a hillside above his equipment yard. There is a romantic appeal about harvesting some of the wood used in building your own house, but Francis takes it to a new level. He has purposely scorned the use of plywood in this impressive structure. He harvested the majority of this wood in this house and processed much of it. The two large vertical beams and staircase supports are Adirondack red spruce, cut in Long Lake and turned on a lathe at 3B Timber Company in Boonville. The paneling shown here is hard maple and the thick steps are yellow birch. All together, he has combined a dozen or more species in the creation of this home.

“Anything I can run equipment to make money doing, that’s how I make my living.”

VanAlstine is always looking at opportunities to diversify, allowing him to earn revenue from a variety of sources. He purchased this gravel crusher in 2007 with that thought in mind. The crusher was stationary and didn’t have a power source when he bought it. He soon had it mobile and found a used diesel engine to power it. The newly itinerant crusher is moved to gravel pits as the need arises. It is shown here crushing gravel on a site near Old Forge.

Crushes gravel—will travel.



VanAlstine on the future: “I’d like to stay logging and doing what I do.”

With a continuous supply of used equipment on the market each year and demand for his talents, this seems to be a likely course of events.



CHAPTER FIVE

NORTH LAKE LEGACY

“The reward for work well done is
the opportunity to do more.”

—Jonas Salk



“We moved up there in November of 1944.”

—Bruce Koenig

Bruce Koenig was two years old when he and his older brother Ted, along with their parents Otto and Ernestine moved into the State House on North Lake. Otto tended the state dams on North and South Lakes. This began a dependence upon and an appreciation for the land as ingrained as any in the Adirondacks. In 1964 Ted and Bruce began their partnership in the logging business. The JP Lewis lands dominated the North Lake landscape and Woodlands Superintendent Bob Bromhall began a long-term symbiotic relationship by putting these enterprising men to work cutting timber. With much of their lives work tied up in North Lake and the fifteen miles of winding road that leads into the lake from Forestport Station, the Koenig Brothers are synonymous with the area.

“I want to be like George Getman and probably work until I’m 74 years old.”

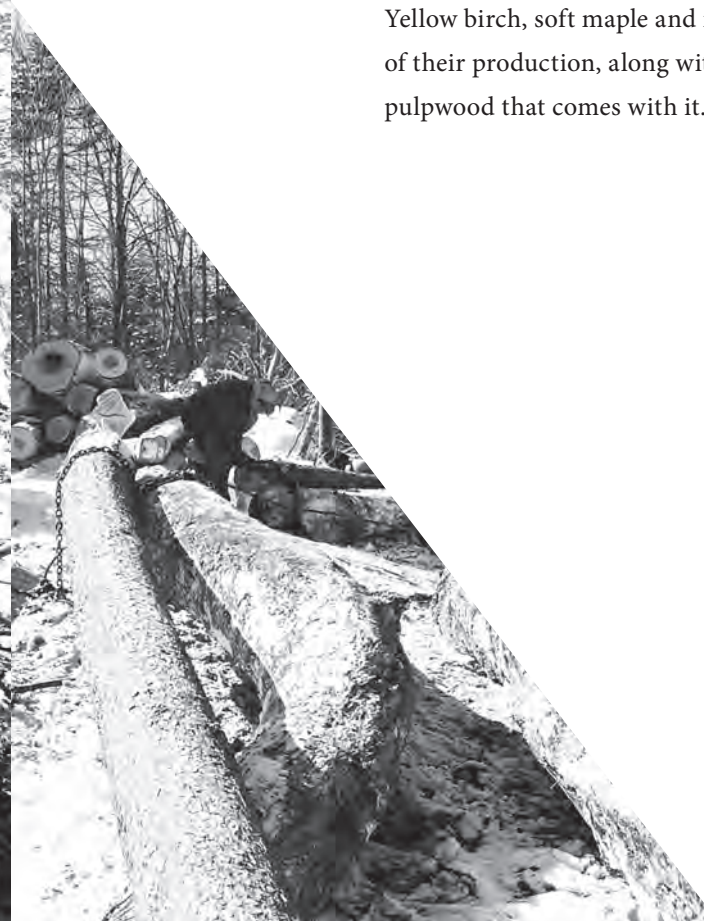
At 66, Bruce is still going strong in the woods. Ted is eight years older and has retired from much of the hands-on work in the woods, though he keeps busy with other aspects of the business. Bruce and Ted’s mother Ernestine kept their books for many years. At 92 she is sharp as a tack and still helps out whenever she can. Ted’s son Eric has taken the lead in operating the business for several years now. This arrangement has enabled Bruce to focus his energy on the part of the business he enjoys most—cutting and hauling wood. He stops here to put tire chains on his truck before driving in on the frozen road to the landing. Chains are necessary to give the truck enough traction to keep it from sliding off the road.





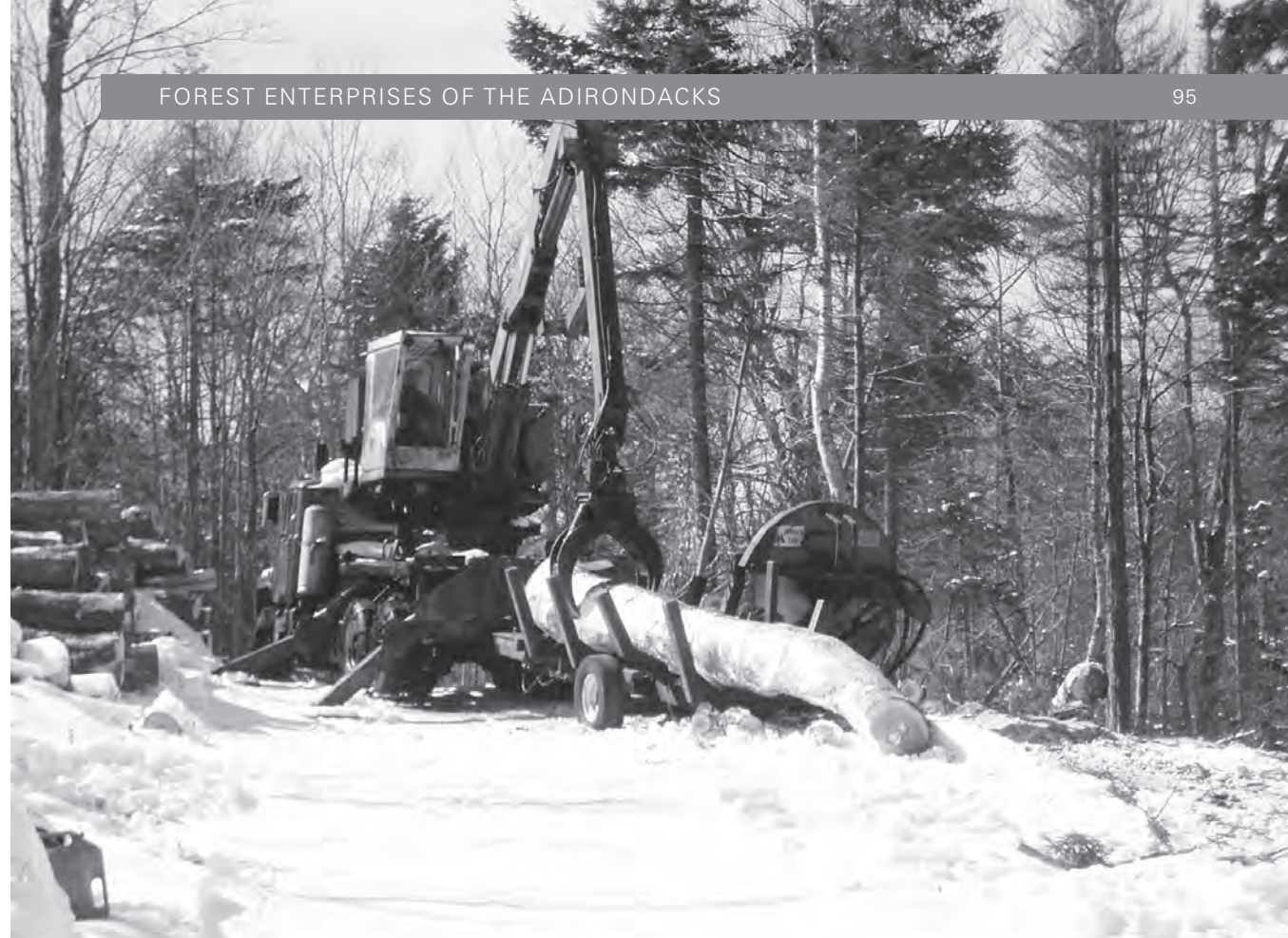
“I like the big woods, see I was born in the woods, you might as well say, and there’s just something in my heart about it. Oh, it don’t matter, cutting wood, I don’t care, I like to cut it all. I always cut the pulp, the spruce and everything as you go. That’s the way we learned when we got started.”

Ted, Bruce and Eric are well acquainted with winter logging in remote locations, pursuing hard-to-reach timber. This timber includes occasional high value stems, along with a much bigger mix of moderate to low value material. Yellow birch, soft maple and red spruce are long time staples of their production, along with the ubiquitous low value pulpwood that comes with it.



“His grandfather was quite known.
He used to hunt them bobcats.”

Josh Graves poses with the log loader on a sunny winter morning. Ted and Bruce thought a lot of his grandfather, Tom Williams, and his great talent at hunting bobcats. Josh is a mainstay in their logging crew, one of a shrinking group of capable young men coming up in this industry. With the Koenigs, your pedigree counts for something. They have always given me the benefit of the doubt because my father did business with them for years and was always helpful when they were broken down or needed parts for repairs.



Josh uses the slasher to buck up a yellow birch stem into logs. The slasher is hitched to the loader. Hydraulic lines from the loader are coupled to the slasher to supply power. This large circular saw makes rapid cuts through the wood. Slasher and loader combinations are a safer and more efficient means of cutting stems into logs than hand bucking, though occasional high quality stems require a level of observation and assessment best supplied on the ground with a chainsaw.



Deep woods innovation comes in many forms. This propane tank is strapped to the back of the loader truck to supply a burner on the underside of the engine block. The burner is used on a especially cold nights to ensure that the truck will start right up in the morning when it is time to put it to work.





A mixed load of hardwood sawlogs makes the winding trip out of the woods on a slope above North Lake. This tandem dump truck can carry 2.5–3 MBF (thousand board-feet) of logs, while a tractor-trailer carries about twice that amount. The longer tractor-trailers require wider roads with fewer curves than the shorter tandem trucks. Carrying a larger load is obviously more efficient, but the roads to harvesting sites that are deep in the Adirondack forest often won't accommodate them.

This old Galion snowplow stands ready to clear the road after the next snowfall. Plowing occurs almost daily in some Adirondack winters, but other times a week or more might pass without requiring the plow. The windshield is covered with a tarp to prevent a build up of ice and snow between uses. The V-plow on the front of the truck throws snow toward both sides of the road. The wing plow on the right side of the truck can be lowered to push snow banks further back. This winging is an essential part of keeping the road open to a suitable width over the course of a long winter, when snow banks begin choking the road.



“The price of logs went too high and they out priced themselves.”

The Koenig Brothers Sawmill began operation in 1974. After ten years in the logging business, they saw an opportunity to do more with the timber they were harvesting. For many years they operated the sawmill in the summer and logged in the winter, stockpiling a supply for the mill. Located on the North Lake Road and beyond the reach of adequate electrical power, the mill was powered by a diesel generator, consuming 100 gallons of fuel each day. Hardwood lumber was sold to widespread markets and softwood lumber was sold to local people for construction and other projects.

The original mill burned in early July of 1995. The lumber business was good at the time and they quickly rebuilt. In 2007, faced with rising fuel costs and sagging lumber prices, Eric, Ted and Bruce decided to sharply curtail sawmill operations and focus on logging. The mill still runs from time to time to produce softwood lumber, but they have no plans to saw hardwoods unless market conditions improve dramatically.

The old truck in the photo is used to collect sawdust. I distinctly remember Bruce telling my father sometime in the 1970's that the truck had half a million miles on it, a number as impressive to me now as it was then.



There was an extensive pile of spruce and fir logs in the Koenig Brothers Sawmill yard in the winter and spring of 2008. When J. Claude Lecours closed down his log export yard in Old Forge, making way for a new arts center to be built on its site, he convinced the Koenigs to take over his softwood export business. Most of this pile is native red spruce and balsam fir, destined for sawmills in Quebec. Some call them stud logs, as much of the material is sawn into two-by-four studs, along with other dimensional construction lumber. Slow housing markets have softened demand for these logs and there were piles of them all over the Adirondacks in the spring of 2008, awaiting shipment.



“We’ve cut that three times. Oh yeah, most all of them we’ve cut multiple times.”

In the summer the Koenigs have traditionally cut timber on more accessible private woodlots, such as this 100 acre tract in the Town of Ohio. A reputation for careful work and their long tenure in the business have lead to them returning to many of these woodlots a second and third time over the years.

Pat Millard was kneeling down and counting the rings on the stump of a Norway spruce he had just fallen when I walked up on him in the woods. Loggers are as curious about nature as anyone, so it wasn't surprising to find him wondering about the age of this tree (85 years). Pat has been working in the woods most of his life. The Koenigs have always attracted good workers and Pat is no exception.



“We bought our first log loader for \$200, an old Bay City Crane. We just recently got \$600 selling it for scrap. We just bought two new tires for the black truck—\$1250.”

The cost of owning and operating equipment has changed dramatically during their 44 years in business. The loader in the photo was significantly more expensive to own and operated than their first one. There is a common perception that the high cost of fuel is driving higher costs for everything—especially replacement parts. Narrow profit margins can logically be expected to result in more people leaving the business. Finding an exit strategy from logging is difficult. Despite the remarkable three-fold appreciation in the value of the old Bay City Crane, logging equipment depreciates in value very quickly when it is in operation. The biggest tangible assets of these enterprises are their logging equipment and it can be tough to sell these machines to a shrinking pool of loggers.



“It’s his.”

Bruce neatly sums up the transition in ownership of the business he and his brother started to his nephew Eric. While many forest enterprisers don’t know what lies on the road ahead, and are pessimistic about the prospects, the successful transition to the next generation is a tangible capstone achievement in a logging career. When Eric was 16, Ted enthusiastically told me that “my boy is finally starting to show some interest in the business.” I first saw Eric as a small boy of four, hopping around on a lumber pile under the watchful eye of his grandfather, Otto. Now in his early 30s, Eric has had enough North Lake style training to perpetuate the family legacy.



CHAPTER SIX

FORWARD THINKING

“Even if you’re on the right track,
you’ll get run over if you just sit there.”

—Will Rogers

“Everybody tries to find a comfortable size and the truth is, there just isn’t any. It’s trying to be as efficient as you can for whatever size that you’re at.”



Tom Donnelly has always been a forward thinker in his logging business. It’s not surprising that he is one of the first in the region to replace a conventional skidder with a forwarder. A forwarder is a machine that carries logs out of the woods to the landing, rather than dragging them behind the machine like a cable or grapple skidder does. This machine transports a greater amount of wood with each trip, though it does tend to move slower than a skidder. It has a noticeably lesser impact on the ground and residual stand of trees than a skidder, as well. The acquisition of this forwarder was part of a bigger change in Donnelly’s approach to harvesting timber. Most logging businesses in the Northeast periodically adjust and try to hit the moving target of the correct mix of labor and equipment for the timber supply and market opportunities available to them. Donnelly made a complete overhaul of his production process.

Donnelly didn’t follow the traditional entry path to the logging business through a family connection. He actually attended the same high school that I did, though he was a few years earlier. It was just the kind of post-industrial inner city school experience that would motivate an enterprising kid to sit in class and daydream about being in the woods. Tom’s route to the woods went through Maine:

“I attended a vo-tech school for six months in Eastern Maine, that was partly sponsored by paper companies. I enrolled up there and ended up working in one of their camps. I worked as an employee on different logging jobs for several years and then I bought a machine and went into business for myself. I was an owner-operator and it grew to reach a point where I had as many as eleven employees.”

Thomas Donnelly Logging is now a two to three person operation. Tom and one employee (Tom, Jr., at times) do the harvesting and a truck driver delivers the wood.



A pile of sawlogs Donnelly produced during the winter of 2007 in Morehouse, NY. ▼



“You’re kind of morphing along with the markets.”

In 2006 Donnelly traded in most of his old logging equipment and converted to a two-man cut-to-length (CTL) harvesting system. In trying to hire motivated employees in a tight labor market, he found himself operating a harvesting system designed for three people with just his son and himself. He would harvest the trees with the feller buncher and his son would pull them to the landing in tree length with a grapple skidder. At some point, Tom would have to stop harvesting trees (hopefully with enough on the ground to keep his son busy skidding them) and go to the landing to process the stems into logs and pulpwood and load this material on trucks. Processing involved picking up each the stem with the loader and pulling them through a delimber. With the limbs off he would cut logs and pulpwood to the appropriate lengths with a slasher. His son would carry the tree limbs back into the woods with the grapple skidder, using them to fill in low spots on the skid trail. Tom struggled with the inefficiency of this process on a daily basis.

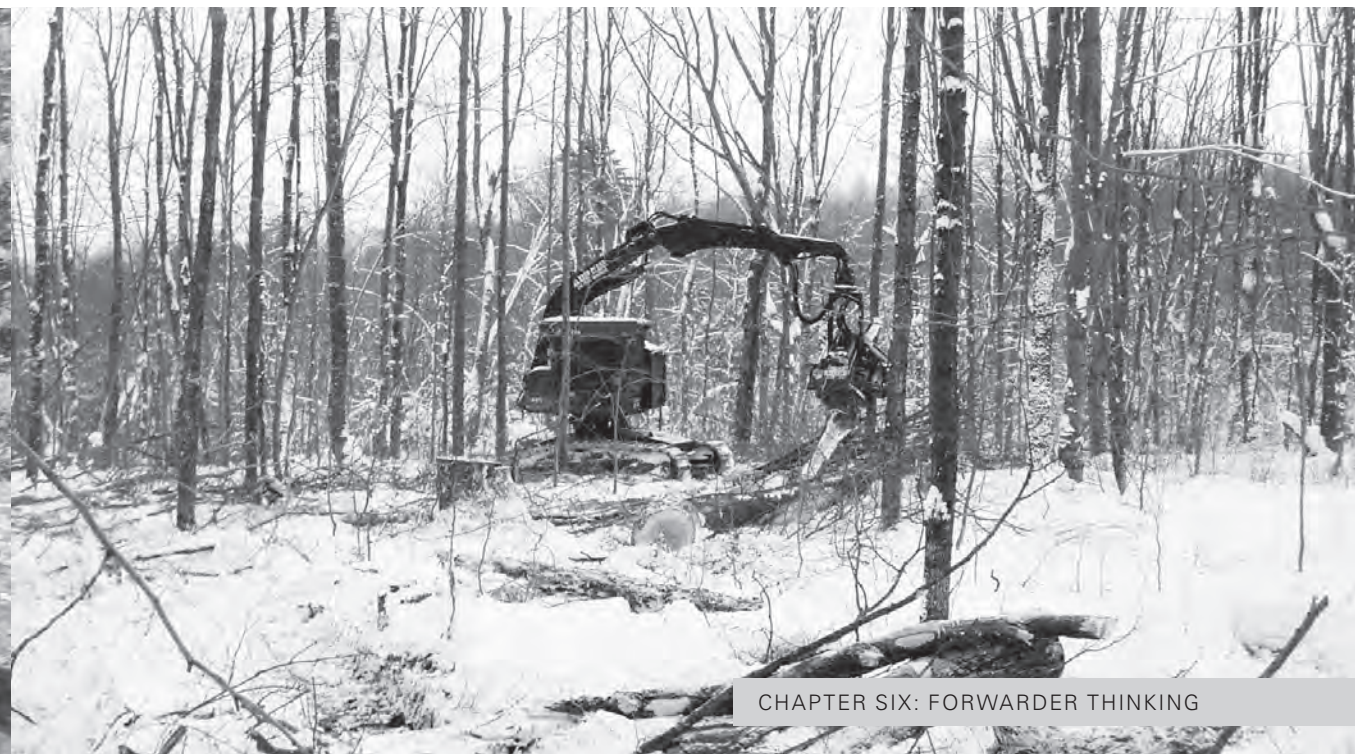
Donnelly’s old grapple skidder [below] and feller buncher [right] were traded in on a new harvesting system.



Donnelly’s new tracked feller buncher is equipped with a cut-to-length processing head. He solved his labor shortage dilemma by rearranging the production process. At first glance, it might appear to be subtle shift—he’s still cutting the trees down with a tracked feller buncher—but there really is a significant difference. The new feller buncher has a CTL (cut-to-length) processing head. After cutting down the tree, he uses this processing head to delimb the main portion of the trunk and then cut logs or pulpwood to length with a great deal of accuracy. The on-board computer can even tell him how much volume has been processed.

These CTL machines have been around for some time, but adoption of them has been slow in the northeast. When it comes to logging equipment, many business people prefer to see a machine prove itself over time before making expensive purchases. Everyone benefits from the other’s guys experiences, good and bad.

This new harvesting machine allows him to complete the harvesting and processing functions in one place, at the same time. He no longer has to park the feller buncher and walk out to the landing to buck up the trees into products. Tree tops are no longer skidded out the landing, only to be hauled back later after the stem is delimbed. All in all, it is a much more efficient process.



A close look at the Waratah cut-to-length processing head that is attached to Donnelly's feller buncher, complete with the manufacturer's representative. Equipment manufacturers differentiate themselves in the marketplace, in part, by the level of service and technical assistance they provide. The Waratah representative spent a full week with Donnelly as he learned how to operate this new system and has had many follow up visits since then. With Tom being the earliest adopter of this system in the region, it was important to provide him a level of service that will ensure good word of mouth advertising in the logging community.



“It’s a slower process at the stump than it was with my old feller buncher, but the whole bucking and delimbing process is taking place right there, at that machine.”

In this closer look at the CTL system, you can see how the processing head dangles from the end of the boom while grasping a stem. Donnelly must be careful to balance the weight of the tree on the end of the boom with that of the cab and tracks on the machine. The cab itself can be leveled in relation to the tracks. This is especially important on the steep terrain that is typical of the Adirondacks.



A red spruce tree is fed through the processing head. A single pass back and forth through the rollers in the head will usually remove all of the lower limbs on softwood trees. Hardwoods may take multiple passes.



A beech stem is rolled through the processing head in this close up view of how it operates. With the controls inside the cab, Tom is able to select the exact log length he wants to cut out of the stem. The stem is rolled through to the appropriate length and then a large chainsaw bar comes down to cut through it. He will pile multiple logs or sticks of pulpwood together in a single pile for the forwarder pick up.

The forwarder (closer) and feller buncher (farther) are not operated jointly, but a fair amount of coordination is necessary for efficient operation. Depending on the distance the forwarder must travel to the landing and the stocking (density) of the trees being harvested, one machine may perform its function more quickly than the other. It is important that none of the small piles of logs or pulpwood is overlooked, as everything must be transported to the landing. The feller buncher and forwarder operators communicate with two-way radios. Apart from coordination, this is an important safety feature as they can warn each other if anyone has entered the work site on foot, such as a pesky forester or procurement agent from a mill. Both machines have blind spots, so it is important for people on foot to keep their distance and try to make the operator aware of their presence.



Tree tops are often placed under the feller buncher tracks. This serves the dual purpose of protecting the ground and accelerating the decomposition process of the tops. While the immediate appearance of these crushed tops isn't especially appealing, they are left much closer to the ground than in conventional logging operations. Some landowners object to the appearance of large, intact tops in their forests. Hand lopping of tops with chainsaws is sometimes done, but it is costly and dangerous for the cutter.

This main trail was used by the forwarder during a winter operation. The tracked wheels of the forwarder displace more weight than those of a skidder. As a result, it can operate under wetter conditions without damaging the ground. In a situation such as the one picture here, the tracks serve to drive the frost further into the ground, sometimes extending the harvesting season. Skidder ruts often extend deep into the ground and must be leveled afterward with a bulldozer or excavator. These forwarder ruts are only in the snow and will melt away in the spring.



“We can work in wetter conditions and we make far fewer passes on a given acre of ground. It’s much easier to control any kind of water issues. It’s much easier to contain those with the forwarder.”

Tom Jr. makes a sharp turn to get to a small pile of beech pulpwood in a harvesting site on the Flatrock Mountain Demonstration Forest south of Thendara. The forwarder articulates between the cab and the bunk. This facilitates turning around and allows it to turn much more sharply on trails without causing undue damage to the woods. Though the forwarder is large in appearance, the overall length of the forwarder is much

shorter than that of a skidder pulling tree length stems behind it.

This forwarder enables them to bring material out of the woods during times when it might have been too wet had they been using a conventional skidder. Finding ways to gain more productive working days is a goal of many loggers. Lost time cannot be regained. Working more hours in a year spreads the fixed costs of being in business across a greater volume of production.



“The scrutiny now is certainly higher than it was in the past when our work involves any kind of watersheds. Water quality seems to be a big thing that everyone is paying attention to, whether you are on private or public land. My pulpwood buyer wants to be able to tell its customers that the wood they are using is being harvested in an environmentally friendly manner.”

This is a DEC permitted stream crossing site on the forwarder trail. You might have to look closely to detect that a stream is even there. The loading boom on the forwarder enables the operator to corduroy (place logs across) the stream and then pack snow over them. The forwarder crosses this corduroy mat at a right angle. Since all of the wood is loaded in the forwarder's bunk, there is nothing dragging along behind that might pull sediment into the watercourse.

Tom Jr. performs some routine maintenance on the forwarder. All equipment requires maintenance. While equipment breakdowns are inevitable in logging, overlooking maintenance will hasten their arrival. The cost to the business is more frequent repairs, lost production time and a shorter useful life for the piece of equipment.

Note the small fuel tank on the ground to the left. The forwarder brings this tank in from the landing to refuel the feller buncher, negating the need to drive the feller buncher out of the woods each day.



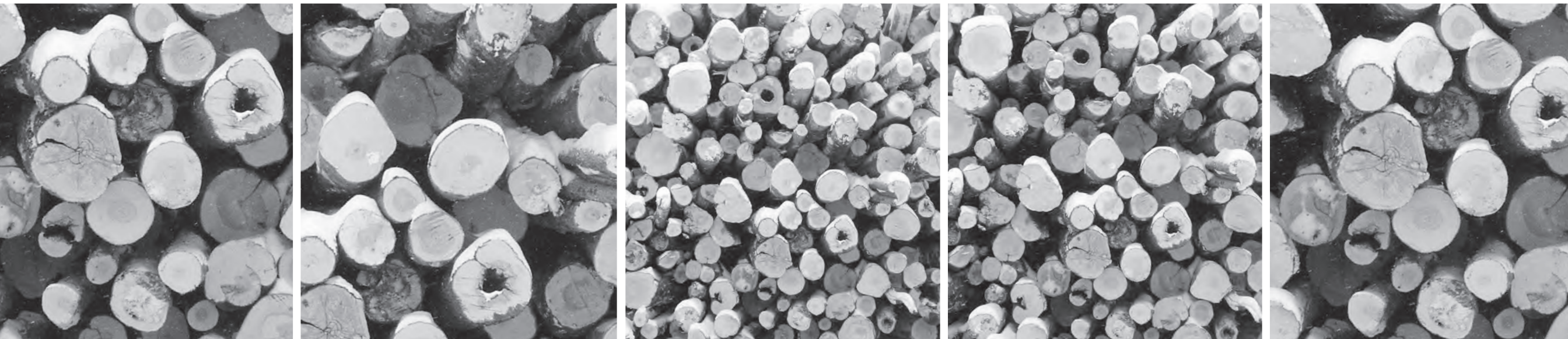
Tom Jr. sorts the load of wood he has forwarded out from the harvesting site. In general, this operation can get by with a considerably smaller landing site, because no processing takes place here. The various products coming from this job must be separated into piles. In this case, hardwood pulpwood, spruce-fir saw logs and hardwood sawlogs are placed in separate piles. The trucker will take a uniform load from one of these piles, depending on his destination.



Donnelly has a Caterpillar bulldozer on hand to assist in his harvesting operations. For Adirondack logging a bulldozer is generally conceded to be an important part of the mix. Roadwork and the preparation and repair of landings and trails are readily accomplished with a bulldozer. While every logging contractor does not have a bulldozer, this is a machine that is useful in combination with any other mix of equipment. These machines are especially handy if any clean up or water diversions are needed at the close of a harvesting job.



“We’re down to two pulp mills locally here. When I started working in this area, I think there might have been six or seven. We are pretty dependent on the pulp mills. It’s a pulpwood economy here. You don’t get to negotiate your price. The price is what it is. Whoever will bring the wood in for the lowest price determines what everybody will bring it in for.”

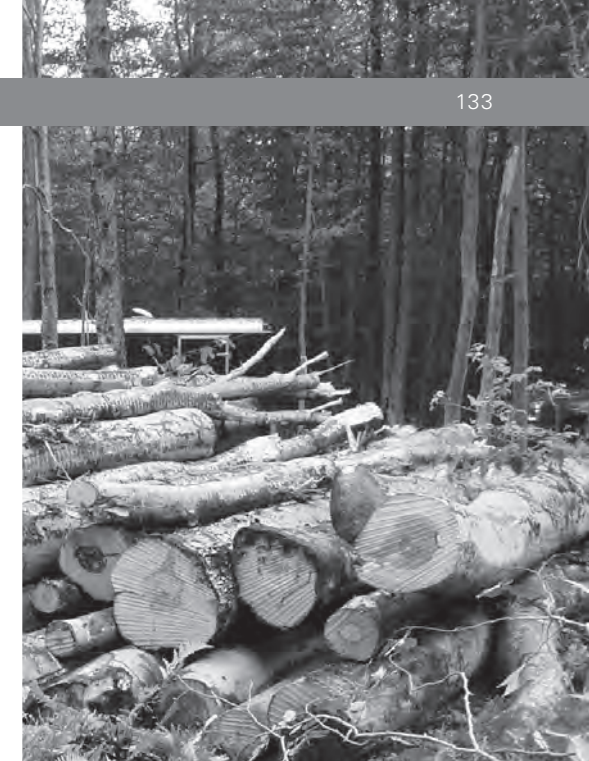


This is a pile of hardwood pulpwood, most of it beech. Donnelly’s switch to a cut-to-length system was driven in part by a shortage of labor, but it was also driven by the nature of the timber available to him for harvesting. Pulpwood makes up the greatest volume, followed by softwood timber and a modest amount of hardwood sawtimber. Low grade suppliers are price-takers, rather than price setters. For better or worse, many forests in the area are heavily stocked with low-value stems. These densely stocked stands are well suited to harvesting with the CTL system.

“The extra production costs are readily passed on to the consumer. The firewood markets can be a little more local and depending on what the local situation is, you may be able to charge a little more for it. We burn a lot of diesel fuel to process wood, so until these skidders and loaders and forwarders start running on wood, the price of wood for energy is only going to be high when our cost of diesel fuel is high.”



Any of the low grade material that is used for hardwood pulpwood is also suitable for firewood, as well as some other energy sources. Recent spikes in heating oil prices caused a great increase in demand for firewood. Firewood logs can be sold directly to the consumer—there are a lot of chainsaw happy folks out there—or to the operators of firewood processors. Instead of selling to one or two pulp mills with little or no competition, the producer has a much larger number of potential customers. With lots of speculation on the future of paper production in the northeast, Donnelly believes wood heating is the best alternative outlet for low grade material if the paper mills disappear. He won't buy into the hype over wood-based ethanol, until he sees private capital invested in it and he has the ability to burn a wood-based fuel in his equipment.





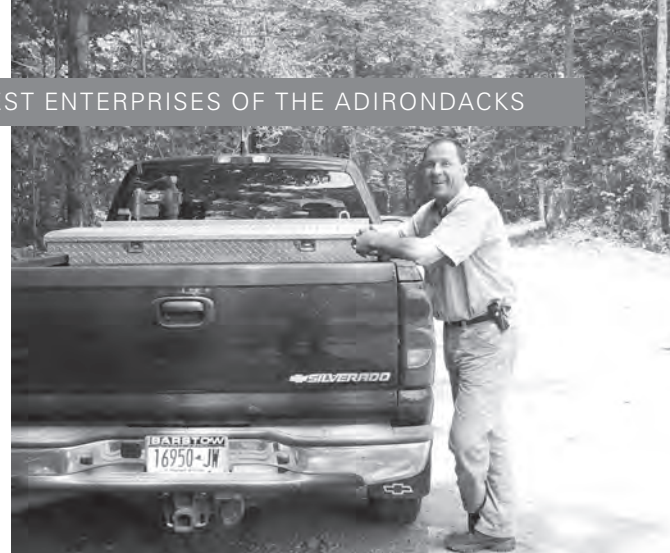
CHAPTER SEVEN

DESTINED TO FLAIL

“Bite off more than you can chew,
then chew it.”

—Ella Williams

Paul Mitchell is the second biggest logging contractor in New York State.



“I started work for Elliot Hardwood in '75 right out of high school and then went from there to working on a couple different contractor jobs for International Paper, and then started my own business in August of '83. I came out of high school and bought a skidder; a used skidder and I went from there to a new skidder, and then a couple new skidders before I actually went on my own. Then a skidder and a loader and two employees. Geeze, it was fast growing. I went to two skidders and the loader and not too long after that four employees, just growing to the point where we are today.”

“I really like where I'm at right now. I'm at a little bit of a plateau that I really like. I'm big enough where I have people in place taking care of the day to day operations that gives me time to look at other options, instead of being a mechanic, underneath one of the pieces of equipment, and I think that's where a lot of timber producers fall short. They don't get to that level and they never can figure out how is the best way to do things. They don't have the time to do it. They're so busy just making it happen.”

Mitchell has made a lot of things happen in his business.

Paul Mitchell's primary product is a high quality, paper grade chip, produced with a new flail chipper he placed in service in 2006. The entire tree can not be made into a chip of this quality, because bark and leaf content in these chips must be kept extremely low for them to be usable by the paper mill. Spinning flail chains separate the clean wood fiber from the bark and leaves. Mitchell receives weekly reports from the mill on the quality of his chips. The size and shape of the chips are important as well. All of this means that careful maintenance of the flail chipper and quality control are an important part of the production process.

New demands are springing up for Mitchell's product as these clean, solid fiber chips are also ideal for producing premium wood pellets for heating stoves. Wood pellets must be free of dirt and bark, so flail chips are a good fit for pellet producers.



Mitchell's flail chipper, shown here, was placed in service in 2006. Tree stems are fed into the chipper and then they pass through a series of three drums, with chains spinning at up to 600 rpm, beating all of the bark, leaves and other debris off the tree stems before creating uniform chips that are blown out through the chute that extends up to blow them into truck vans.



Flail chipper chains eventually deteriorate to the point where they can no longer be used. The three drums in the chipper must be checked each day and new chains installed when necessary. Replacement chains are one of the major costs of doing business. All of the worn out chain is recycled, save for a few links that find their way through the chipper and into the loads of chips.

“When we added that fuel truck, it was like we gained another man on the job.”

Paul Mitchell, referring to the advantages fueling all his equipment using a single fuel truck over using multiple pick up truck mounted fuel tanks.

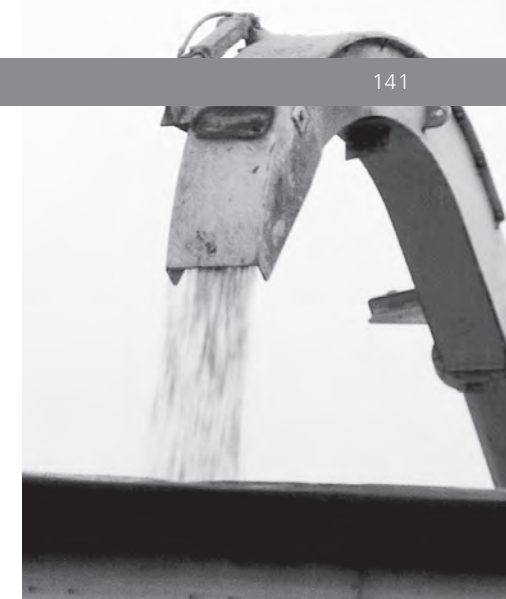
Diesel fuel, along with timber, labor and equipment is a major input in the production process. Paul uses 2,500 gallons for all of his equipment in an average week (that’s over \$600,000 worth of fuel at 2008 prices). He keeps an older fuel truck on the job site simply to accommodate storage of all of the fuel he will need.

Mitchell, when asked about the prospect of someday being able to create a usable bio-diesel fuel on the job site from gasification of some of the trees he harvests, replied: “That would be awesome.”



The chute from the flail chipper deposits clean wood chips into the top of a trucking van. In the past, most of this fiber left Mitchell’s harvesting sites in the form of roundwood, a lower value product. The introduction of the flail chipper into his equipment mix enabled him to produce a more valuable product.

“We’re doing it more efficiently, plus it’s a higher value product when it leaves the land here. I got that opportunity from International Paper and I had to work long and hard to get that opportunity, but that’s been a huge turnaround for us being able to supply paper grade chips. We are meeting and exceeding what they thought we could do. We were their largest round wood supplier and went from there to being their lead chip supplier.”

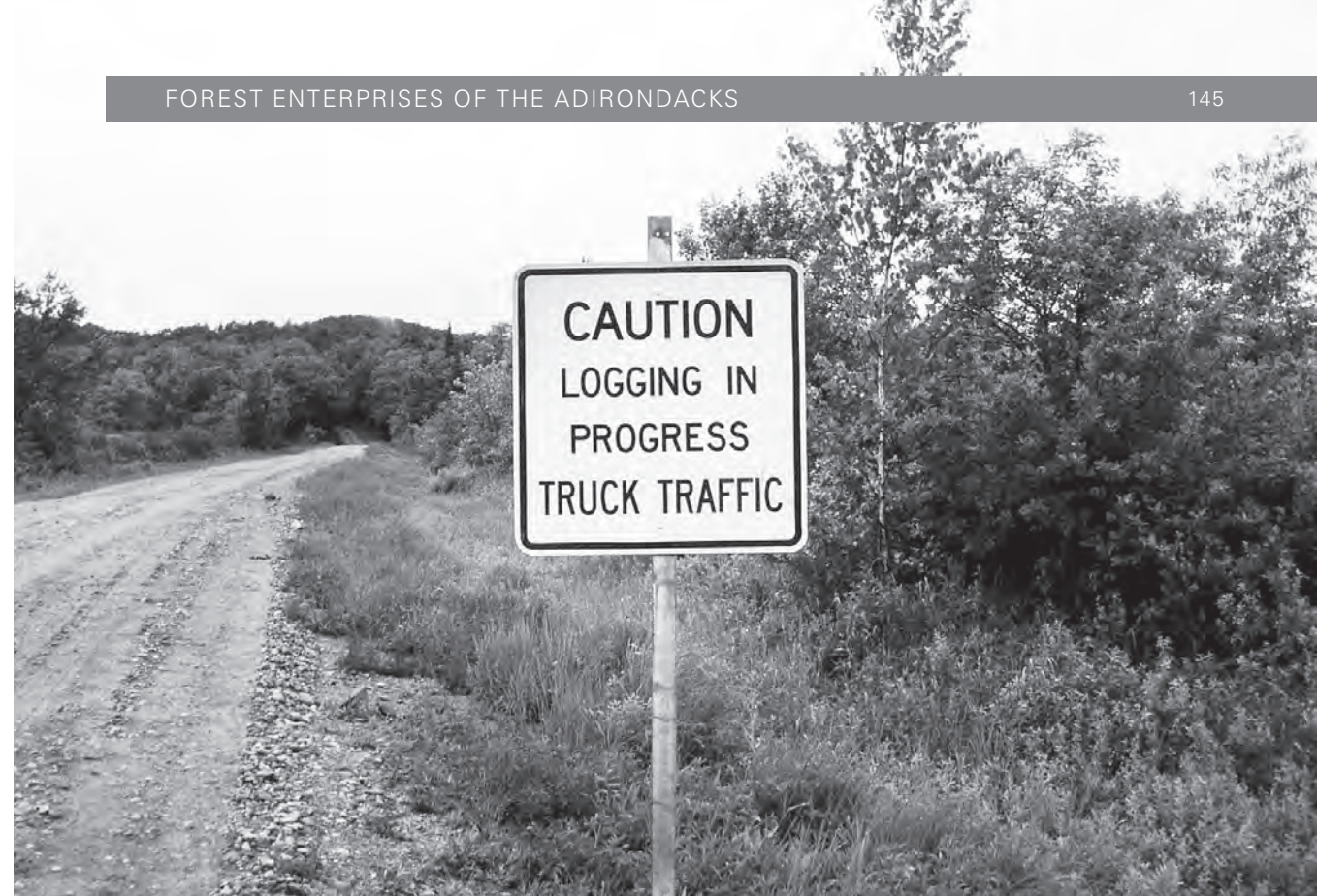


Mitchell's other main product is a low quality (and lower valued) mulch-like chip. This material generally accounts for less than 12 percent of his production, by weight. It is created from a combination of the debris from the flail chipper and the tops and limbs of trees. This "dirty" chip is usually sold to energy producers.



Mitchell's ability to retain employees has been a great help in the growth of his business. His many pieces of logging equipment require operators and support staff for maintenance. In a labor environment where it is difficult to hire skilled, motivated employees, he still retains the first worker he hired in 1983 and currently has 21 employees. There is no point in adding equipment if he is unable to find anyone to operate it. There has been a contraction among many other logging businesses in the region for this reason. Others have found ways to substitute mechanization for labor.

Paul Mitchell's trucks have become a familiar sight on the roads between the central Adirondacks and various pulp mills, wood boilers and energy plants in the north country and beyond. He has seven trucks on the roads. When working at full capacity, they deliver 10–14 loads of chips per day.



If roads are the key to supplying many of the benefits that come from the forest, they are also a place where conflicts between user groups may occur. Mitchell places his signs along any private roads near his job sites that might be shared with other forest user groups. These signs give fair notice of the truck traffic that may be present.

Experienced users of woods roads in the Adirondacks realize that tractor trailers cannot readily back up on these narrow roads and will take it upon themselves to back up to a point where they can get off to the side of the road. It's simply a matter of knowing woods road protocol. Forest novices stop in the middle of the road and wait for the truck driver to blink. It's often a long wait.

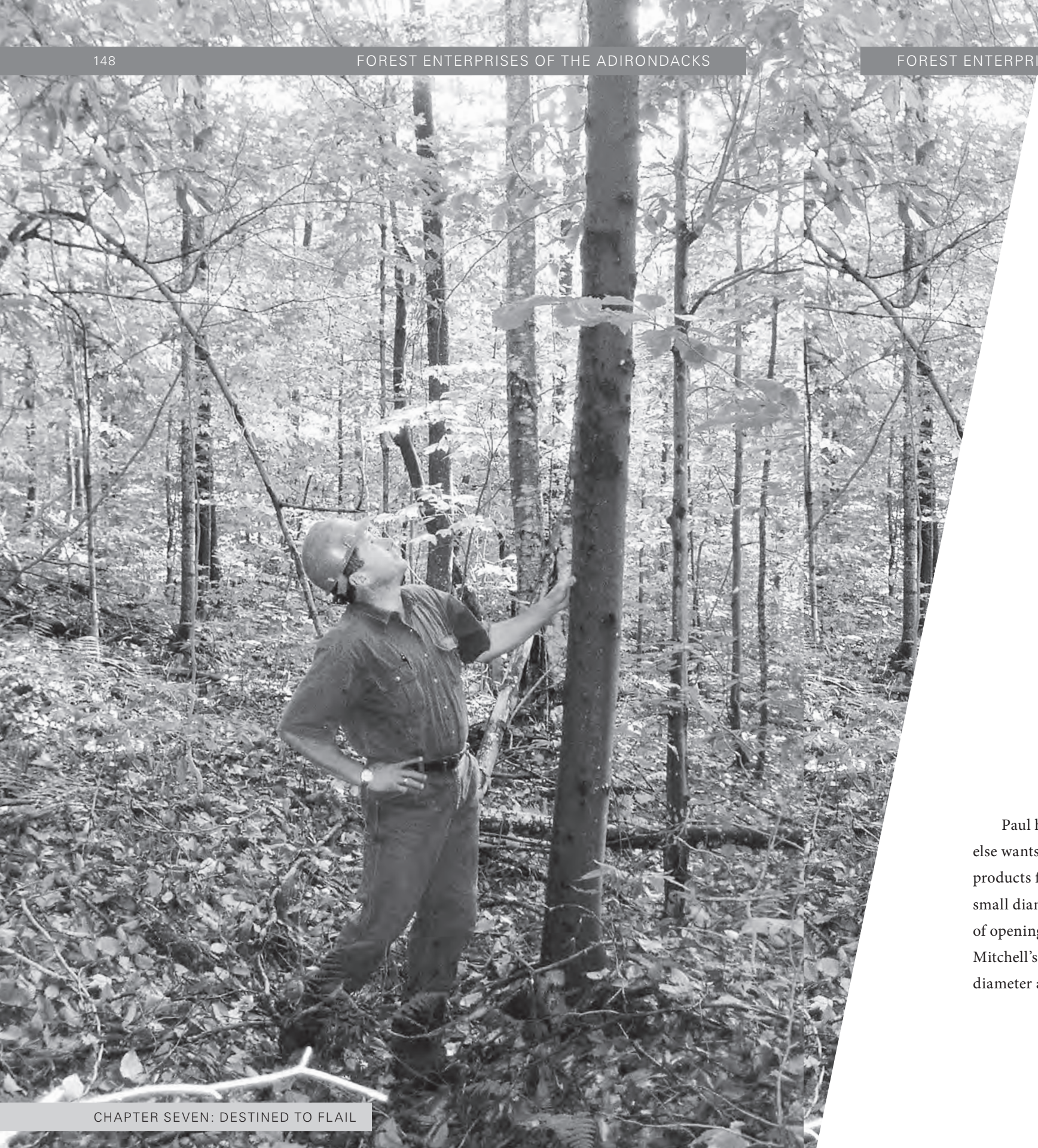
Roads and logging equipment don't mix very well. It is occasionally necessary to cross a road with a skidder. This tends to damage the road, making it impassable for vehicles. In this case, crossing the road was absolutely necessary, but it was important to keep the road passable for vehicles during the course of the operation. The solution was to build up a corduroy mat of trees in the ditch on both sides of the road, allowing the skidder to pass over them at a right angle. Because the roadway is entered by the skidder from above, rather than from below, the gravel is less apt to be pulled away.

Necessity, followed by trial and error, leads to many such operational solutions.



A successful timber harvesting operation is one in which both the landowner and logger are made better off by the transaction. Efficient removal of low grade timber means, in part, protection of the residual stand. Mitchell knows that being able to use small, low quality stems is only half of the equation. These stems must be removed without damaging the more valuable ones that are left behind. In the photo above, a small beech tree was cut about four feet above the ground. The remaining stub serves as a bumper to protect the more valuable hard maple crop tree that is next to it. When the grapple skidder comes by pulling a hitch of stems behind it, they will rub against the bumper instead of the crop tree, preventing a good bit of damage.





“We are selling a product but I think what we’re providing is the service more than anything. A clean-up service I call it, take the garbage out. That’s the impressive part of what we’re doing, we hit a stand like this, the revenue we create on basically unwanted trees is pretty impressive.”

Paul has figured out an economical way to harvest and utilize trees that no one else wants. Larger, low quality hardwoods have been utilized for pulpwood and other products for quite some time. The challenge has been bringing about the removal of small diameter, unwanted trees, such as beech, that have a tendency to take advantage of openings in the overstory and thus create another rotation of low quality stems. Mitchell’s operation is able to effectively harvest trees as small as four inches in diameter at breast height.

The tracked feller buncher grasps a stem before cutting it off. Aptly named, these machines are used to fell the trees and bunch them together for the skidder to pull them to the landing. Such machines are a much safer way of harvesting trees than hand felling with a chainsaw, because the hand feller is far more exposed when the tree falls to the ground.

The operators of these machines are highly skilled. It has been said that it takes a year or more to learn how to operate one. Mitchell uses a pair of them in his operation. Smaller trees can be picked right up and are easily handled and moved around. Larger trees are more difficult to lift. It is a question of balancing the weight of the tree and its leverage on an extended boom with the weight and position of the machine. Try balancing an upended broomstick in the palm of your hand and you will get a sense of this challenge.



“As fast as he grabs a hold of the tree, it’s cut.”

A close up view of the cutting head on the feller buncher shows the coarse individual teeth. This is a continuous or “hot” head that spins the entire time the machine is running. A saw head of this type is considered the most efficient for use in small diameter, low quality timber.





This partially cut beech tree shows the width of the kerf where the stem is severed by the feller buncher's saw blade. This is considerably wider than the kerf of a chainsaw, but in low value material such as this the minor loss of wood is inconsequential.

A grapple skidder pulls a hitch of small beech stems to the landing area for processing. There is fierce competition to purchase high quality, sawlog quality timber. Lower value stems are abundant, but difficult to harvest efficiently. Paul Mitchell grasped the possibilities of this reality.



“This was a conscious decision by me. I decided in 1999 that it was easier to buy low grade than to compete in the sawlog market with the saw mills.

It just didn't make sense to butt heads with them. You weren't going get the good wood anyway. Any good wood was going end up in the sawmills. So I decided I wanted to figure out how to cut this low grade and turn a profit. It's just a lot easier to find and everybody wants it cleaned up.”



One of the competitive advantages Paul Mitchell has is the ability to cover a lot ground in a short amount of time. On a recent timber stand improvement operation on the Webb Community Forest, they removed all of the unacceptable growing stock on 175 acres in a 30 day period, start to finish. This included cutting approximately 11,000 trees in ten days. A smaller operation would have taken much longer to complete this job, creating a much wider window of opportunity for conflicts with other uses of the forest.

“I think we wear out our welcome. We’re so intense when we’re there that, when we leave, they’re glad we’re gone. Most places it seems to be if the landowner isn’t of that mindset, the community is because the just don’t want to see the traffic anymore.”

The inside of Paul Mitchell’s repair shop in Tupper Lake is a busy place. With many pieces of logging equipment and trucks to keep serviced and running, Mitchell employs three full time mechanics. Many loggers dream of having adequate space and tools to keep their operations moving. Given his size, a facility of this type is a necessity for Mitchell.





Unforeseen delays are inevitable in coordinating production and delivery schedules. When one of his trucks broke the deck boards on this bridge across the Moose River, Mitchell moved swiftly to make a temporary repair so that trucks could continue to access the job site. Steel plates were brought in, along with his service truck. Working like a well-oiled machine, they had repairs complete in about 45 minutes and trucks rolling across the bridge soon afterwards.

With an eye toward diversification and the future, Mitchell recently formed a new business—Mitchell Stone Products. He was looking for an enterprise that could take advantage of his existing service, labor and equipment capacity and settled on stone products for road building, driveways and related improvements. He has an agreement that allows him to produce these products from tailings at the old iron mine at Tahawus.





“I’m lucky I’ve got a son that’s involved with it, that takes care of a big part of it for me, a wife that’s involved with it that’s huge in the business, I’m real lucky there.”

Mary and Paul Mitchell pause for a moment in their busy Tupper Lake office. Paul recently confided that Mary has been so busy with the business that he has been cooking dinner.

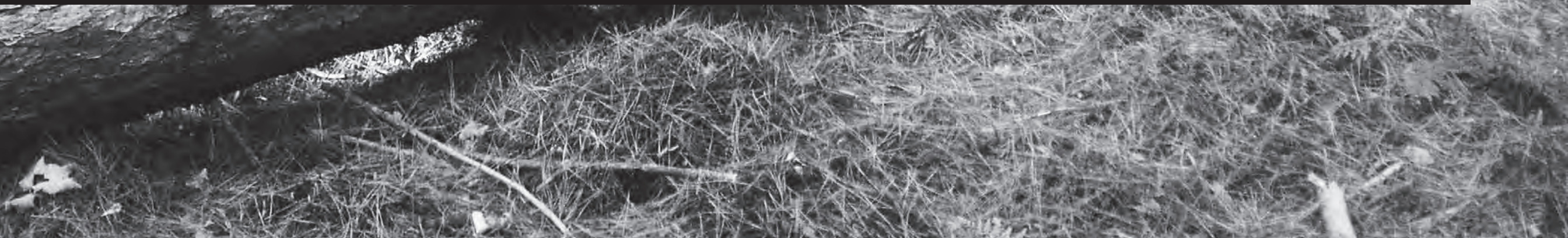


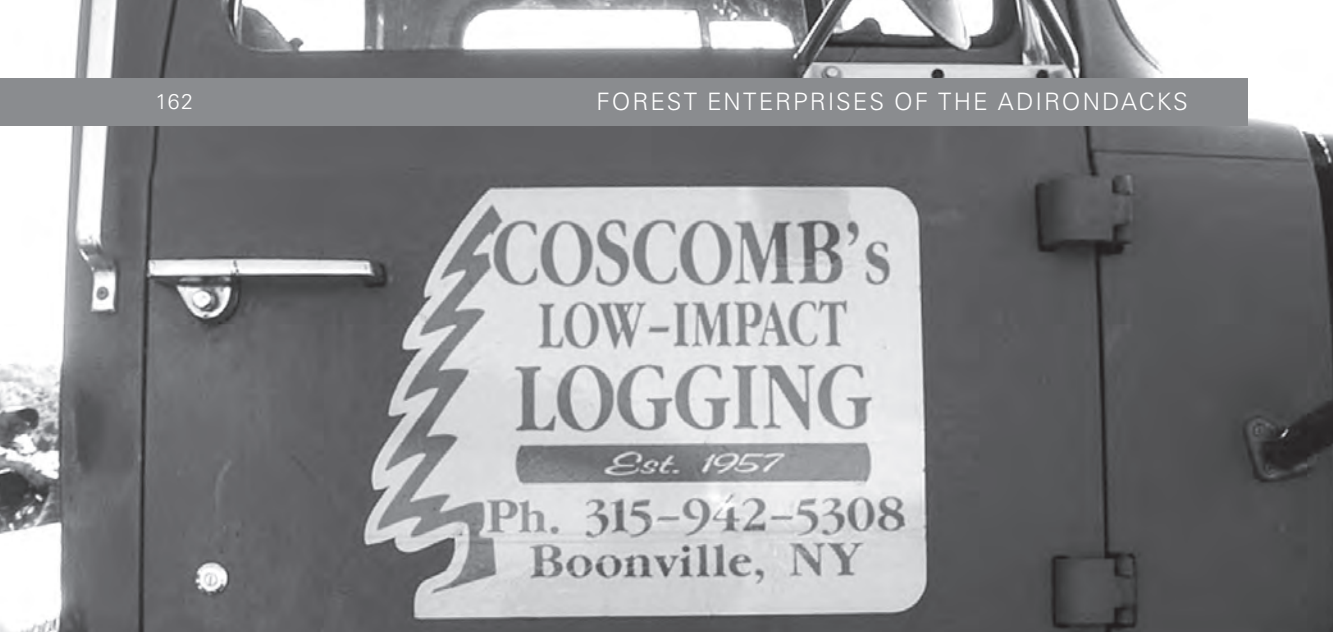
CHAPTER EIGHT

WOOD IS WONDERFUL

“Successful people are very lucky.
Just ask any failure.”

—Michael Levine





Bob Coscomb, Sr. started a logging business in 1957. His approach was to work on small woodlots, cutting by hand and skidding with a small bulldozer and skidding arch. In doing this, he found a variety of ways to add value to the wood he produced, from splitting firewood, to sawing shingles and shakes and producing lumber. Bob Jr. came along a few years later and began helping him at a young age. Bob carries on this 50 year old family enterprise to this day, conducting as much business on a part-time basis as other people do in full-time employment.

I can't remember when I didn't know the Coscomb family. My father was friendly with Bob Sr. and I have interacted with Bob Jr. many times, both in small woodlot operations for clients and in Bob's full-time, official capacity as a New York State Forest Ranger. My lasting memory of Bob Sr. is a bumper sticker, posted on one of the beams of his shingle mill some time in the 1970's. It read: "Wood is Wonderful."

"I usually use this machine for 50 trees or less."

Coscomb drives his John Deere 350 bulldozer into a red pine stand on a private tract near Buck Lake in Oneida County. His father purchased this bulldozer new in 1974 and it has been in the family ever since

This dozer makes an ideal low-impact machine for his operation. The tracks displace more weight than four wheels and the blade allows him to repair any damage to the ground. Tracked machines are slower, so Bob likes to keep his skidding distance as short as possible, preferably no more than 600 to 800 feet. On larger jobs with longer skidding distances, he uses a 1976 Timberjack 208 cable skidder he acquired specifically for its small size.

When a job contains a very small volume of timber, keeping fixed costs to a minimum is essential to making it worthwhile. This machine can be moved on a small trailer, making it much less expensive to transport than his skidder.



“This was marginal ag land that was probably planted in the 1930s.”

Much of the Forestport area has reverted back to forest land, after it proved too unproductive for agriculture. Some of it was planted with red pine and other softwood species by the Civilian Conservation Corps during the Great Depression.

Careful directional felling is part of a low-impact approach to timber harvesting. Coscomb cautiously notches a red pine with the blade of the bulldozer wedged against the tree to ensure that it doesn't fall in the wrong direction. Selectively thinning a pine plantation can be difficult, as trees are prone to hang up on one another in the felling process. Bob has mastered a technique of picking the spot where he want the tree to fall and then using the bulldozer to push it in the right direction.



Coscomb looks up, contemplating the tree he is about to fell. A purpose-built skidding arch is attached to the back of the bulldozer with a hitch. Bob explained that his father purchased this arch in 1963, the year Bob Jr. was born. He had been harvesting timber above steep ledges in the Nobleboro area and believed this simple attachment would make the work easier. The arch has proven itself many times over past 45 years.

A cable extends up from a winch on the back of the bulldozer and hangs over a pulley. This allows him to lift the butt end of felled trees off the ground, making it possible to skid them out of the stand to the log landing.

“It used to be hardwood was so much better than softwood, but with this downturn in hardwood markets, I like cutting softwood.”

With a tree severed from the stump, but solidly hung up in the tops of adjacent trees, Coscomb places a choker chain around the stem and attaches it to the cable. He can then pull it tight with the winch and slowly drive the bulldozer forward, carefully pulling the tree to the ground. Once the tree is pulled to the landing it will be bucked to length and then loaded on his truck.

“I can put out thirty of these trees a day, that’s all.”



This is an unsophisticated sawmill. Bob Coscomb turns a log by hand, after first sawing off an outside slab. Logs must first be sawed into a squared cant. Once squared, a board is sawn from the cant with each successive pass of the bandsaw blade. Bandsaw blades have a thinner kerf, or cutting blade thickness, than circular saws. As a result they turn less wood into sawdust and more into lumber than their rounder, thicker cousins.



Coscomb follows a value added strategy for some of the logs he produces. His father added this Woodmizer brand portable bandsaw mill to the operation years ago. Bob uses it to saw softwood lumber.

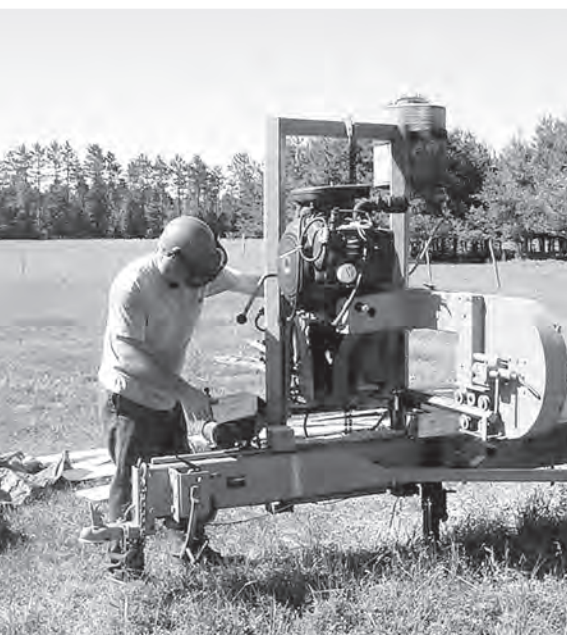
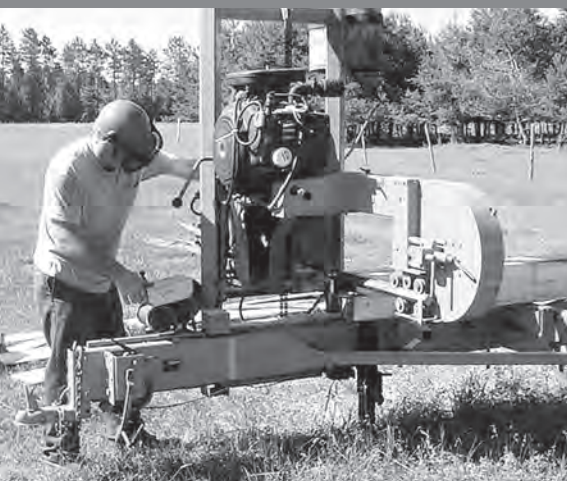
Mills such as these are growing in number throughout the northeast. Owners of these mills are often called to bring them to a site for custom sawing, charging by the board-foot or by the hour for their work. Alternatively, they simply focus on small scale production of various types of lumber—usually softwood. Steady lumber suppliers soon find more customers than they need. One part-time sawyer of my acquaintance even resorted to sawing at night, because too many friends and neighbors sought him out for lumber each time they saw him start up his mill.

An old Indian Fire Pump has been converted into a lubrication can for the Woodmizer sawmill. These hand-operated water pumps were designed to be carried on the backs of forest fire fighters and are still in production and use today. Manufactured by D.B. Smith & Company, some consider them the City of Utica, New York's proudest export.





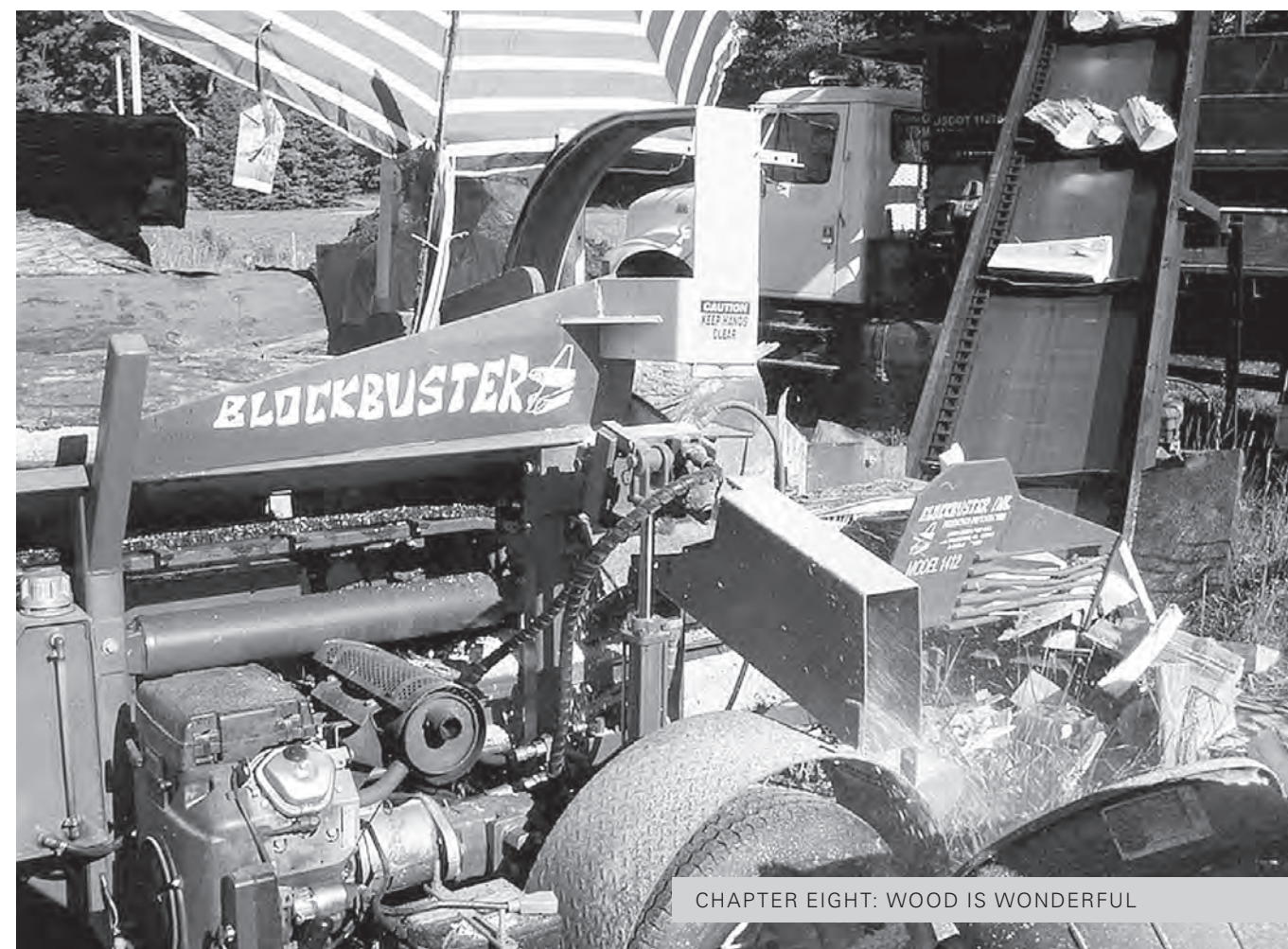
With his last pass, Coscomb rips the remaining two pieces into four two-by-four boards. When operated by one person working alone, this sawmill will produce about 200 board-feet of lumber per hour. Suppose that 200 board-feet of logs can be purchased for \$60 (30 cents per board-foot). If sawing the lumber from these logs doubles their value to \$120 (60 cents per board-foot), the machine can produce revenue of \$60 per hour. This revenue must be sufficient to cover fuel and lubrication costs, depreciation, repairs and maintenance and the opportunity cost of the owner operator's time to make it a paying enterprise.



With this balsam fir log squared, Coscomb saws off a two-by-four feet with each pass. He will typically saw balsam fir, red spruce, hemlock and white pine into various types of dimension lumber for construction projects. Note that head, eye and ear protection are important safeguards in operating this machine.

Coscomb added a firewood processor to his equipment mix a few years ago. With oil prices climbing, he correctly anticipated the resurgence of interest in wood heat. The US Department of Energy estimate that nearly 15 percent of US households burn wood for some portion of their heating needs and this number is surely on the rise. There will probably always be an ornamental market for firewood—people who burn two face cords or less each year in a fireplace, more for the ambience than the heat. In contrast to this are many consumers relying on wood as their primary source of heat. Several factors play into this—cost, a desire to heat with a renewable resource and resentment of public utilities.

Apart from price, firewood producers can differentiate themselves in a number of ways—green or seasoned options, payment terms, prompt delivery and courteous service. A firewood producer who builds up a loyal customer base will have a steady supply of repeat business from one year to the next. Coscomb has taken all of these things into account in building a recurring customer base for his firewood.



“It ain’t all gravy.” Robert Coscomb Sr.

Bob’s father offered this cautionary advice whenever a big check from a sawmill came in, repeating it again whenever one of these seeming windfalls was balanced by an inevitable large repair bill. This advice is equally relevant to the pile of small and misshapen stems and tree tops shown above. While the larger and straighter portions of a hardwood tree are much more valuable, each of them comes with some of this low grade material attached.

This less valuable hardwood is often sold by the load to homeowners who want to cut and split their own firewood. Other

consumers prefer to burn wood, but aren’t interested in the do-it-yourself approach.

With piles of this material that must be handled on almost every timber harvesting job he does, Coscomb has an abundant supply of wood for the firewood processor.

As a small scale operation, it isn’t convenient for him to put together tractor-trailer loads of hardwood pulpwood. Pulpwood producers tend to be price takers, at the mercy of the mill. This fact holds little appeal for Coscomb’s competitive nature. Firewood producers create a retail product and are in a better position to name their price.

This firewood processing operation is aligned for maximum efficiency, right down to a garbage pail catching the sawdust, which Bob saves for a neighbor. Most of the value of firewood is created in its processing, with little left over to attribute to the value of this wood as standing timber. Bob accumulates firewood logs from various harvesting jobs in a yard close to home. When weather or time considerations keep him from working on the other aspects of his forest enterprise, he spends time producing firewood. A loader places the logs onto a deck. Logs are rolled one at a time onto the conveyor. Here they can be pulled forward to the desired block length and then cut off with a hydraulic chainsaw bar. The block drops and a ram propels it slowly forward into the four way splitting wedge. Larger blocks must occasionally pass through the splitting wedge twice.



CHAPTER EIGHT: WOOD IS WONDERFUL



CHAPTER EIGHT: WOOD IS WONDERFUL

As wood goes through the splitter it falls onto a conveyor belt and is carried up onto the truck. Loading firewood by hand takes a significant physical toll on a person, lowering production. Many firewood producers have found conveyor belts to be more reliable than teenage labor.



A dump truck is perhaps the most expedient way to deliver firewood. With a square box like this one, it is easy to estimate the volume of wood being delivered. A full cord is all of the wood that fills an area of 128 cubic feet (usually 80–90 cubic feet of solid wood) and is equivalent to three, 16-length face cords. Split firewood is generally sold by the face cord. A face cord is equal to all of the wood that fills a space four feet tall and eight feet wide. The actual volume depends on the length of the wood. Perhaps the most common length is 16 inches, though some consumers prefer other lengths to accommodate large fireplaces or outdoor wood boilers.

With a substantial portion of his forest enterprise involved in further processing of the trees he harvests, Coscomb needs an ample workshop. Many friends are jealous of this shop. His single axle truck is parked out in front. This small truck, with its dump box, wooden sideboards and steel stakes is well-suited to delivering the products of his small scale operation. Filling this truck with wood on any given day is an attainable goal.



Part museum and part functional work space, this rough-cut paneled, well organized workshop affords Bob the opportunity of maintaining and organizing his gear (Bob offers no explanation for the golf clubs). Glancing at saws of a bygone era and an old pulp hook that he probably used just the week before, the only thing that seems to be missing is an *Wood is Wonderful* bumper sticker.



CHAPTER NINE

LIVING ON THE [WOODS'] EDGE

“Some see the glass as half-empty,
some see the glass as half-full.
I see the glass as too big.”

—George Carlin





“Most people know that the woods do need to be managed, but haven’t taken that initiative because of the common perception of what a logging job looks like.”

Tom Bartiss of Vermontville makes a living with his Woods Edge Forestry enterprise. Tom came to the Adirondacks from the oak-pine country of Connecticut to attend Paul Smith’s College. He left for logging work in both Pennsylvania and southern New England for a while, but the Adirondacks enticed him back like the sea calls to a sailor. Tom’s combination of drive, ability and people skills are tailor-made for self-employment.

“Everything is word of mouth. One person just relays the information to the next. The job quality, the aesthetics, the concern for the environment and a sensitive approach to shoreline views are all things that bring me work.”

Bartiss uses a tractor in harvesting timber, instead of a larger and more conventional skidder. A machine like this is better suited to high quality than high production. This is an important point in dealing with a client base that is willing to

sacrifice a little bit of timber revenue in favor of aesthetics. Forest owners develop a certain comfort zone in working with Tom because they sense that he shares their concern for the outdoors and understands the values that are important to them.



“I try to utilize everything that I can that is economical –sawlogs, firewood and even wood chips for landscaping.”

In offering a variety of services, Tom focuses on a couple of themes in his work. One is to minimize his impact on the land. The other is to maximize his value recovery from the trees that he harvests. He has found a niche working on small woodlots, where there is often valuable timber in close proximity to driveways, trails, camps and other improvements on the landowner's property.

“They don't want to leave something that their kids might inherit down the road in a poorer state.”

“I have a tandem axle log truck that becomes my landing and it enables me to haul out of areas that might be accessible to other contractors with a tractor and trailer and larger equipment.”

When timber is harvested, the products it yields must be hauled away from the job site. The extent of the operation often dictates the size of the landing or staging area. Most large tracts have a series of existing landings in logical locations from past harvesting activities. Smaller landowners are less eager to convert some of their limited land area into a conspicuous opening for loading trucks. Bartiss caters to this natural inclination by using a smaller truck and loading wood directly on to it each day, foregoing the need for log pile storage space whenever possible. Instead of leaving a clearing full of woody debris that may take many years to blend back into its surrounding, Tom simply drives his away at the end of the job.



“You really have to know the cost per hour of running your operation and relate it back to how much production you are going to have—board-feet, cords of woods or whatever it is.”

Bartiss has a good understanding of all the inputs that go into setting up on a job site and processing trees in a way that is going to be acceptable to the landowner. When aesthetics are more important than production, the logger must be especially knowledgeable about the costs involved, to be sure that the production from the forest will be enough to make the job profitable. If a forest owner has many extra services in mind in connection with the harvesting operation, hourly fees may be necessary.

Safety is one aspect of his work that Tom does not take for granted, especially with him working alone much of the time. He has attended all levels of the popular Game-of-Logging training program. Game-of-Logging emphasizes safe and effective cutting practices, as pioneered by the legendary chainsaw and felling expert Soren Eriksson.

Tom modified his tractor to provide a reinforced roof for overhead protection. Ensuring protection from falling trees and branches is sometimes overlooked, much to the logger's peril.

Bartiss swings his axe to drive a plastic wedge into hemlock tree he is cutting down near a camp on Loon Lake. Wedges help persuade a tree to fall in the intended direction (away from buildings and power lines). Plastic wedges are lightweight and will not dull the chainsaw if he accidentally saws into them.

Tom is decked out in all of his safety gear—his helmet includes ear and face protection, his chaps will actually stop a chainsaw chain before it can cut him, and his steel toe boots protect him from both chainsaw cuts and heavy falling object. Tom has more boots than some women have shoes, and he can give you a reason for each style. As always, his trusty tape measure dangles from his belt.



This Caterpillar skid steer with a tree shearing head is the latest addition to the Woods Edge Forestry equipment mix. Tom plans to find many uses for this machine. The shear allows him to cut and move small to medium sized trees. This is useful both in the efficient harvesting of low-grade trees such as the Scots pine shown here, as well as trees in close proximity to buildings and other improvements. This tracked machine has a more modest impact on the ground than most wheeled machines. The inset on

the upper left shows the very low stump that the shear leaves behind. Low stumps are important from a utilization standpoint and in some tree work situations where the customer does not want to incur the expense of stump grinding.

Like many loggers, Tom occasionally takes on a variety of excavation work. There are many other attachments made for this skid steer, including a front end loader, backhoe, entrenching tool, post hold digger, snow bucket and more.





“The woods definitely have to be managed,
but there may be a cost associated with it.”

Second homes have long been popular in the Adirondacks. Lake shores and large trees combine to make home sites particularly desirable. At home in the woods, you are eventually confronted with the reality of forest conditions—trees grow and decay, often simultaneously. Windstorms knock down branches and whole trees. Shade is pleasant on a summer day, but it tends to shorten the life of a roof. Many of these homeowners have turned to Tom Bartiss for tree services and advice.

This large white pine stub was felled as a safety measure near a lake front second home. The rot in it is evident. A small fire many years ago caused some damage to the lower portion of this tree, opening it up to decay that eventually spread into the heartwood and up the stem. The tree eventually died and fell apart piece by piece over several years.

“My approach is to try to utilize as much of the log as possible, but the most volume doesn’t always correlate with the maximum dollars.”



Tom always follows some essential rules to maximizing value recovery when bucking logs. One is to cut the logs to accurate lengths, including requirements for several inches of trim, over and above the nominal length. For example, a ten foot sawlog must be ten feet by four feet in length. Tom carries a measurement tape with him (I’ve seldom seen him without it) and carefully measures the logs to his intended length, marking them before cutting.



Another of Tom's practices is to cut the logs to minimize the amount of sweep and crook. Trees naturally tend to grow into irregular shapes, often bowed over an extended length (sweep) or changing direction abruptly due to forking or past wounds (crook). An experienced buckyer will cut the straightest logs possible from the stem, increasing the usable volume at the mill.



“Look for the highest grade log—work around that log.”



Another way of realizing most of the value potential from a tree is to find the most valuable log in the stem and work around it. Most often this will be the butt log, though in some cases the second log or some section slightly above the butt will contain the clearest, most defect free section. In a perfect world the butt log is the largest and has the fewest defects, but this section is also exposed to damage by past harvesting practices.

Bartiss knows that there are some cases in which you will sacrifice a foot or two of length in order to cut a log that meets the standards for a higher paying grade.



Cutting the longest possible straight log that can be made without having it drop to a lower price grade is another sound bucking practice. The 12 feet long black cherry log here meets the standard for a No. 1 grade sawlog. If Bartiss had made this log 14 feet long, it would have gained more defects and dropped in diameter below the stated minimum for the No. 1 grade. As a general pattern, logs will become smaller and have more defects (especially knots) as you go higher up along the stem.

By following proven rules-of-thumb, and then carefully marketing the logs he produces, Tom is as certain as he can be that he is getting the most value from the trees. Proper utilization is an important aspect of sustainable forest practices.

“I try to express lots of things that I have learned. I try to get the point across to students that bigger isn’t always better and that quality matters. If you do a good job you will always have work to do. In the logging business you’re probably not going to be a millionaire when you’re done, but it is a good way to make a living.”

Tom Bartiss was the first log bucking instructor in the entire northeast to be certified by the USDA Forest Service sponsored Hardwood Value Improvement Project. In addition to his work for clients, he has taught timber harvesting at Paul Smiths College. His hands-on experience is invaluable in giving the students a taste of how forestry and the free market interact.



Mona Lincoln (left) of the Northeastern Loggers' Association presents Tom Bartiss, along with Fran McAllister and Elizabeth Stankus of Paul Smiths College, with an award for outstanding support of hardwood utilization practices for the northeast region. Tom was instrumental in helping the Hardwood Value Improvement Project take hold in his area.

“When they look into the woods they want to see some depth.”

A view of Tom’s operation from the wood’s edge certainly reveals a lot of depth.

CHAPTER TEN

VERTICAL INTEGRATION &
FARM WORK EMANCIPATION

“Slaying sacred cows makes great steaks.”

—Dick Nicolosi

“The mill was just part time to start with and then the farm wasn’t getting taken care of the way it should have been and we got out of farming. I never imagined it would get to this point. I don’t know how many calls we’ve gotten just today.”

—Bill O’Brien



O’Brien Lumber evolved from a dairy farm run by brothers Bill and Tim O’Brien into a family forest enterprise. Located in Lyonsdale on the western edge of the Adirondacks, much of their land fronts on the Black River. Their father owned the farm before them, adding more land as it became available until it reached its present size of 1,700 acres. Close to 70 percent of their property is forestland. In the past they sold some timber each year to help pay the property taxes. In the mid-1990’s they purchased a Wood-mizer bandsaw mill with the idea keeping busy in the winter sawing some logs. It wasn’t long afterwards that all the cows were gone and the barn was full of lumber and sawdust.

With their own on-site supply of timber and a tractor for harvesting it, coupled with a sawmill, kiln, planer, shaper and a truck and trailer for delivery, O’Brien Lumber is vertically integrated from the stump to the consumer.

“We buy just about all of our softwood logs. Most hardwood comes from our property. Anything in the hardwood species, if we’ve got it we cut our own.”

The log yard is directly across the road from the sawmill and the forest begins at the edge of the field. In some locations they can harvest timber with their tractor and skip the expensive step of trucking it by skidding it right into the log yard. This forest has abundant northern hardwoods—hard & soft maple, yellow birch and especially black cherry. A large power line bisects the property along the ridgeline. Bill and Tim eventually learned that there is more the forest could provide as they created value added products from logs and lumber. By leasing the land to a local hunting group and selling gravel from several pits, the brothers tap into additional revenue streams from the many benefits a forest offers.



An open bay to the pole barn that houses the sawmill allows logs to be brought in for processing. When logs enter the yard they are sorted and piled by species. A John Deere skid steer is used to bring them to the entry bay. Two squared cants serve as skids. Individual logs are rolled over to the carriage with a peavey (the skid steer can pull right into the bay to lift heavier logs).



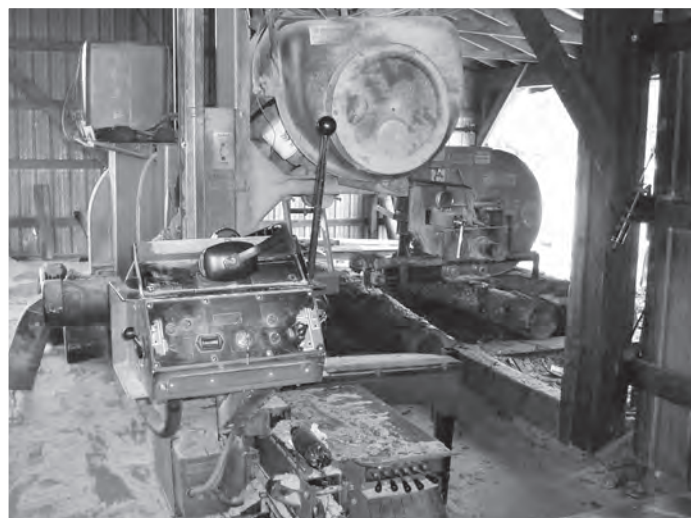
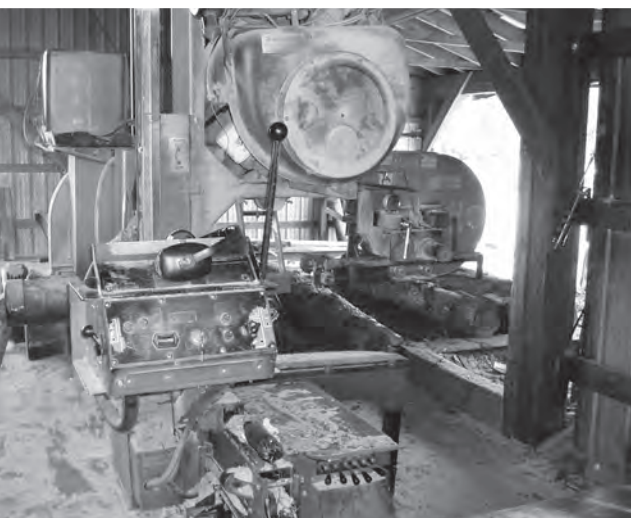
The interior of the O'Brien sawmill shows the workspace for primary processing. Bill does most of the sawing, though brother Tim sometimes relieves him to take care of other duties. Though the bandsaw itself is portable, it is set up here on a semi-permanent basis. When the mill is very busy, the brothers sometimes hire a second portable sawmill to saw softwood logs outdoors in their log yard.

In contrast to a large circular headsaw, where the log is fed into the blade by a carriage, this bandsaw is physically walked down the length of the log, which remains stationary. Lumber must be picked up off of the log by hand as it is sawed, and then placed onto the appropriate piles—lumber is usually sorted by width and length.

“I know we can get better—I don’t really want to get any bigger.”

An operator (usually Bill O’Brien) operates these controls on the end of the bandsaw, walking along behind them as the carriage travels the length of the log. The sawyer must exercise considerable skill to get the best yield from the logs. Much of the O’Brien’s work is custom sawing, where they are trying to get as much yield of a particular product as they can from each log. There is always something left over—logs are seldom evenly divisible by the dimensions of the intended product.

Careful operation of the sawmill yields uniform products. No mill likes to have the “thick and thin” label applied to it for sawing lumber of unpredictable thickness.



This rolling deck sits behind the bandsaw. Lumber and slabs are rolled down it to the exit port on the end of the building. Though much of the lumber must be moved and sorted by hand, simple devices such as this make the work much easier.



Slabs are sawn from the logs to square up a cant. The slabs are a by-product that can be sold to a chipping operation or can be cut up and burned. Small bandmills typically do not debark the logs prior to sawing them. O'Brien Lumber occasionally gets an order for exterior siding with the bark intact. A special order of this type requires a lot of careful handling to ensure the bark is not damaged or knocked off.



An outdoor wood boiler is used to heat the kiln (in the background). This boiler uses the residue from the sawmill, including slabs and edgings and even some sawdust. The boiler heats water that is conveyed in an underground hose to the kiln, providing radiant heat. The alternative to heating this kiln with wood would be expensive electricity, propane, or oil. Partial self-sufficiency in the energy supply is an important piece of the puzzle for a manufacturing operation.

These outdoor wood boilers are becoming increasingly popular as home heating sources. All of the mess involved in heating wood is kept outdoors, usually at a safe distance from the house (insurance companies reward this feature). Wood heat is considered carbon neutral, as the carbon from wood is destined to be released to the atmosphere at some point.



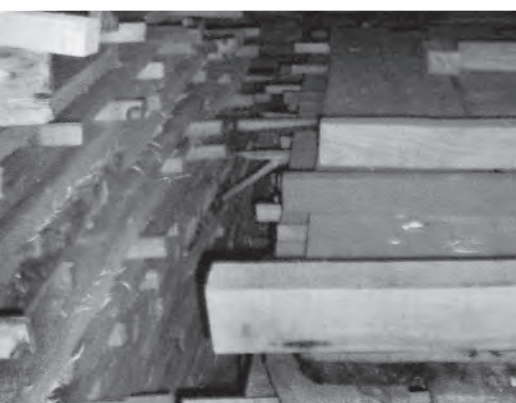
This lumber kiln is a recent addition to the enterprise. Their original kiln was smaller and heated with electricity. The addition of this larger kiln is a direct response to the increasing demand for custom products from dry lumber. Each step in the process adds value.

“I like doing the work—there’s days for me when it’s like therapy.”

Bill struggles to remove a packet of overly long lumber from the kiln without dropping the stack. The larch logs this lumber was sawn from were cut too long—some as much as a foot by the logger they purchased them from. This logger will remain nameless, but he is profiled elsewhere in this book (hint: he thinks wood is wonderful).

While a good deal of the work at the sawmill is routine and repetitive, there are daily challenges, some of them more satisfying than others.





A load of stacked lumber sits in the kiln drying. “Stickers” are placed between each successive row of lumber to allow air to pass through and moisture to dissipate as the lumber dries. Wood will always retain some of its moisture, but minimizing the moisture content is essential to keep this material relatively uniform in size so that it can be used in creating finished products.



“The one thing that farmers couldn’t do was to name their price.”

The basement of the O’Brien’s large old barn was insulated to house their first small scale kiln and provide workspace for the secondary processing of lumber. Tim O’Brien practices his craft here. After leaving the kiln, value is added to the lumber by planing it and shaping it into products that are ready for use in building projects. Much of their lumber production is processed into flooring, paneling and siding to meet the special needs of individual customers. Bill quotes customers a price prior to accepting orders. After some trial and error, he has arrived at a means of quoting rates that he believes are fair to everyone.

“I don’t ever want to forget how we got here—from people who bought a few two-by-four boards. When you forget *that*, is how you get yourself in trouble.”



▲ “Adirondack” style siding



“Adirondack” style siding is a popular product that leaves an irregular surface from the outside slab of the log along one edge. It is installed in the same way as clapboard. There are no mass producers of this product, so consumers must turn to custom sawmills such as O’Brien Lumber to find it. Small orders such as this were the foundation of this business. While larger scale production is more efficient, Bill O’Brien manages to fit in smaller runs for long standing customers and neighbors whenever possible.



“The custom work is what got us here—doing something no one else could do.”

A large hard maple burl sits outside the mill, awaiting its turn on the saw carriage. Burls are prized by woodworkers for the unique patterns in their wood grain. This burl will be slabbed into boards that will be used as table tops. Short irregular bolts like this one cannot be sawed with a headsaw and only specialty mills like O’Brien Lumber will take the time to process them.



“When you are starting out in business, you do whatever to get the work. What I’ve found out is the guys that can do it for less normally don’t stay in business. On the other hand we don’t want to raise our prices until people don’t come any more. How do you get them to come back?”

Tim O’Brien poses with a pile of hickory lumber he will process into wide flooring boards for a special order. He is proud to note that they can produce and sell this flooring for about half the retail price quoted by many catalogue and internet outlets. Hickory is not a native Adirondack species, but the flexibility of the O’Brien mill and the diversity of hardwood markets allowed them to obtain hickory logs from another sawmill. Lumber from the O’Brien mill might be sold to a neighbor or it might find its way around the world to China. This interaction with diverse markets and people is an intriguing and rewarding part of the business to brothers Bill and Tim.

“I think that things are getting better, with the boys coming down to work. I see a future here, where maybe a while back I didn’t. I look back and all the hard work is worth it if they take an interest in the business.”

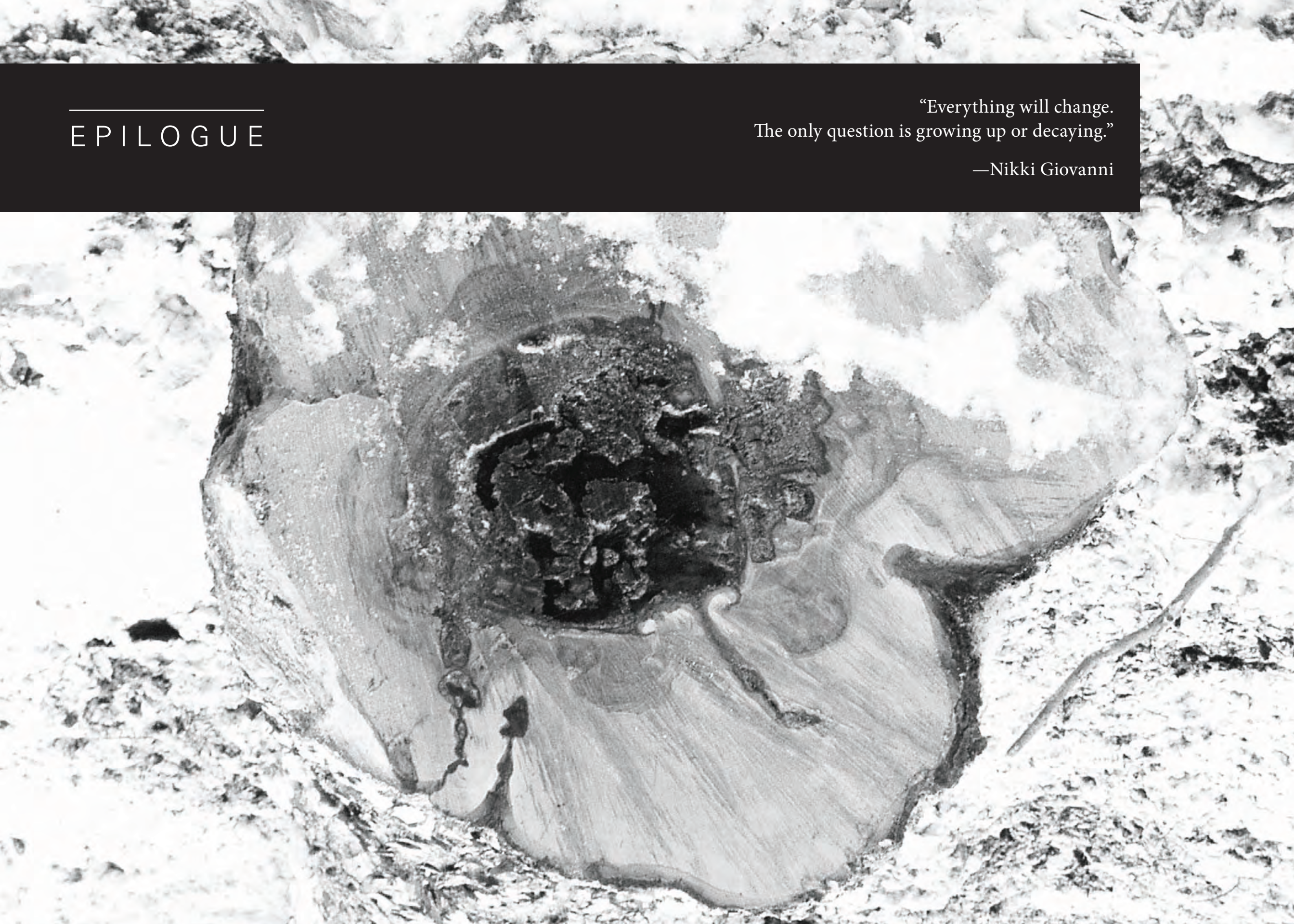
Ethan and Conrad are Tim O’Brien’s sons. Though young, both have shown great interest in the business and an aptitude for the work. The boys’ involvement is a source of pride for both Tim and Bill. Family enterprises often start as a way of making a living and evolve into a way of life. It is important to them that the land remains in the family. Envisioning another generation taking over is both motivation and reward for their efforts.



EPILOGUE

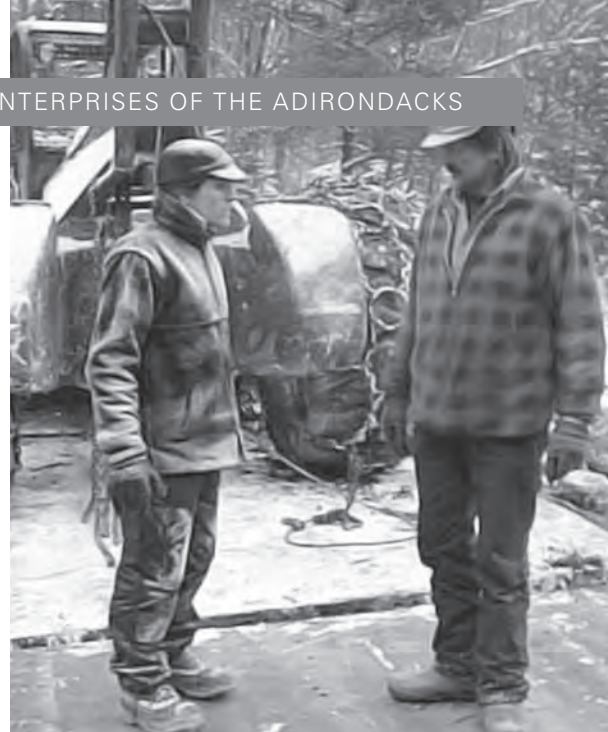
“Everything will change.
The only question is growing up or decaying.”

—Nikki Giovanni



“You make them sound like elves.”

—Alison Berry



A vibrant collection of enterprising small businesses are at work in the Adirondacks to satisfy the need for wood products. Berry made this elf comment after reviewing an early draft of the first chapter of this book, and she was right. My first descriptions didn't fully describe the nature of loggers and their work in the woods. While most people probably don't hear or see these loggers on a day to day basis, it's not elves that get this work done. Loggers have many things in common with the other small businesses in the Adirondacks, but they don't have store fronts on Main Street and are often overlooked because of this.

“Report me and my cause aright.”

—William Shakespeare

Loggers are uncomfortable in the spotlight, but their story deserves to be told and their businesses should be recognized at the community and regional levels. This reluctant logger took a lot of coaxing before he would consent to television interview about his participation in skidder bridge workshop. Most loggers are humble and many prefer to fly under the radar. On the other hand, it takes a willingness to share their stories to correct misconceptions about them. I have appreciated the cooperation of the eight businesses profiled in this book and I believe they have done a service for their peers.



“People are very open-minded about new things—as long as they’re exactly like the old ones.”

—Charles F. Kettering

Today’s loggers are different than the original Adirondack lumbermen and more inclined toward protecting the land and water than their immediate predecessors. If you still think of logging as having something to do with men swinging axes or associate it with a rutted trail you once followed through the woods, it’s time to take a closer look. Machinery has replaced labor in accomplishing most harvesting tasks and best management practices for protecting water quality have been adopted far and wide.



“Hope is not a method.”

—General Gordon R. Sullivan

Hope is a good approach to purchasing lottery tickets, but it won’t get you through the day on a logging operation. Operational challenges like this tipped pup trailer require ingenuity and know how (note: they winched the trailer upright with a skidder from the side while slowly pulling the truck forward). Strategic challenges are more difficult, especially when large financial commitments are made with the expectation producing wood products for years to come for constantly changing markets.



Young Adam Levi skillfully operates a firewood processor in his family's yard in Inlet.

“The family is one of nature’s masterpieces.”

—George Santayana

Family keeps many forest enterprises alive and often enables their growth. Having five uncooperative brothers myself, I marvel at the Levi Brothers ability to get along and work together effectively. Fran VanAlstine relies heavily on his father’s advice in his business, along with the occasional help from his brother. Bruce and Ted Koenig’s life work culminates in Eric taking over the business. Tom Donnelly just made a successful transition to a completely new harvesting system and is quick to tell you he could not have done it with out his son’s participation. Paul Mitchell credits his son and wife for making business growth possible and worthwhile. Bob Coscomb was born into the wood business and still uses his father’s old bulldozer. Tom Bartiss is a young man with no family connections in his business, but it wouldn’t be surprising if he turns out to be the first of a long line in the business. Tim and Bill O’Brien work as partners and find Tim’s two sons’ interest in the business encouraging.

Family stories aren’t hard to find in the logging business. Businesses persist and grow because of them.

“If people knew how hard I worked to achieve my mastery, it wouldn’t seem so wonderful after all.”

—Michelangelo

Logging is hard and dangerous work. A forest enterprise faces a considerable investment in equipment, an uncertain labor supply, shifting markets for wood products, rising fuel costs and heightened landowner expectations. For every impressive load of valuable sawlogs like those in the photo, there is a demanding harvesting process and piles of lower grade material to handle efficiently. Perseverance and enthusiasm for the work is usually tempered with hard-earned experience before a logger finds the right niche.

“Man masters nature not by force but by understanding.”

—Jacob Brownowski



“Adapt or perish, now as ever, is nature’s inexorable imperative.”

—H. G. Wells

Change makes perfection a moving target for a forest enterprise. The truth is there is no single best size, but rather a mix of equipment and labor that gives them the flexibility to connect harvesting opportunities with markets for wood products at various points in time. Emerging markets for wood fiber dangle opportunities, but it may require hundreds of thousands of dollars in investments to test them. More than one logger has realigned their equipment mix, only to find they were just exchanging one set of challenges for another. Most logging businesses go through periods of both growth and contraction.

“Change is inevitable, growth is intentional.”

—Glenda Cloud





“I’ve never seen a monument erected to a pessimist.”

—Paul Harvey

In the year and half it took me to collect photos and stories for this book, prices, expenses, markets and opportunities were a constant topic of discussion in the logging community. A few loggers who couldn’t retain their optimism in the faces of some of these changes dropped out of the business. Others retooled to prepare for the road ahead.

My challenge in describing these forest enterprises is that all of them underwent changes over the course of my writing. The forest is dynamic, as is the forest economy. New markets emerged for biomass, traditional sawlog markets went into a downturn and labor shortages forced further mechanization. The realities portrayed here have surely shifted further since this was published.

This book could be written again in 2018, profiling the same businesses and an entirely different volume would result. If you have the good fortune to encounter any of these forest enterprises, expect them to have changed a bit since I took these photos.

“Industry and determination can do anything that genius and advantage can do and many things that they cannot.”

—Theodore Roosevelt

Logging is a difficult enterprise. Many individuals persevere in this industry despite its many challenges. I admire the things these men accomplish and their willingness to do the work.



ABOUT THE AUTHOR

Steve Bick is a certified forester who lives in Thendara, New York. He has managed forest land in the Adirondacks since 1988 and traveled extensively around the northeast to work on continuing education programs for loggers. Research, training and stewardship form the core of his work. He is a lifelong supporter of private landowners and small businesses.

Bick holds a PhD in forest management and economics from Virginia Polytechnic Institute and BS and MS degrees from SUNY College of Environmental Science and Forestry.

Steve's writing and work in the woods fall somewhere into place behind a family at home, including his wife Jennifer, her son Evan and their daughters Fern and Darby. Steven can be reached at: www.northeastforests.com.

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A tribute to the logger—the person who faces the challenge of weather, whopping debt, temperamental equipment, and equally temperamental markets because they love the work.

—Ross Whaley
Senior Advisor, Adirondack Landowners' Association

In this book Steve Bick has captured authentic conversations with some of the hard-working people who make their living in the Adirondack Forest. He's also taken some great photos. This is a book to hold onto.

—Joseph Phaneuf
Executive Director, Northeastern Loggers' Association

Two roads diverged in a wood, and Steve Bick took the one less traveled by portraying loggers in a positive light. By doing so he opens up new frontiers for forest enterprises and helps save timber and loggers at the same time.

—Laura Huggins
Editor, & Research Fellow, Property & Environment Research Center

Read the book and you'll have a better understanding of forestry in the Adirondacks and the strong backs and sharp mind, who make the system work.

—Al Steele
Forest Products Specialist, US Forest Service

This is an up-close and personal description of the region's logging and timber processing activities with a strong focus on the people involved. It will help in understanding an evolving industry of great importance to the Adirondack Park's economy and open space character.

—Steve Erman
Special Assistant for Economic Affairs, Adirondack Park Agency

Steve uses a story telling approach to guide us through the interesting world of logging in the Adirondacks. What we discover along the way is the ingenuity, grit, and passion of the forest entrepreneurs who make things happen in the woods.

—Luc LeBel
Professor & Program Leader of Forest Operations, Laval University

Long overdue recognition of a vital part of the equation that has gone unappreciated for far too long. Given by a professional who knows every facet of the equation.

—Mart Allen
Columnist, Adirondack Express

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