Partners News

February 2011

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Inside this issue:

JOE'S COMMENTS

We have an information packed issue for you here.

Long time member Mike Kispert has talked to me about his land in the Penokee Hills for a long time, and here we have an insight into that. Mike shares his logger-forester experiences. Thank you Mike, enjoy your family woodlands for many years. The Penokee Range is a target for a new iron mine proposal. Some talk is of a strip mine up to 22 miles long. Time will tell if the new job creation "business friendly" attitude in Madison sacrifices our clean water. If we can't depend on DNR to protect our water, we sure are not going to get water protection from manufacturers and commerce.

For years now, most of us as woodland owners, have been indirectly influenced by the actions of the corporate and large investment owners. PIF has studied this and reported on it in these pages for a long time. Most of us own woodland for a variety of reasons, and long term investment potential is very important to many of us. Last year when Dave Speirs joined PIF, I knew I needed to tap his knowledge, to satisfy our collective curiosities as to how these investment woodland owners think and function. Dave is a forest land specialist with LandVest. I have found my interview with Dave to be very insightful, and I am suggesting that we can treat this interview as a primer, as he seems willing to discuss all of this in further detail with us.

There are some good forest health features in this issue. Thanks to John Schwarzmann, PIF VP, for his research in the hemlock concerns. Thanks to Bill Cook, from Michigan Extension, for the story on wintering trees.

We need help with Forest Fest. Trees for Tomorrow has recruited PIF to co-sponsor this event. It appears to be a lot of work, and we are looking at this as our big event of the year. If you can help, please get in touch with Rod Sharka or me.

Thanks to those who have paid their dues in a timely fashion. If anyone knows of anywhere else where we can get the amount of effort that PIF volunteers expend on your behalf, for $25 year, please let me know.

In the next issue, look for details on Lee and Margo Popovich's Conservation Easement. To celebrate their efforts PIF is to host a spring birding workshop on their land, which we will also plan out prior to the next issue.

This is your COOP, please be involved!

Winter Adaptations

Prepared by Bill Cook, Forester/Biologist, Michigan State University Extension, 6005 J Road, Escanaba, MI 49829

Article #166, January 2011

How do trees survive the winter?

There are two main challenges: the cold and a lack of liquid water. Trees have two main survival strategies: chemical adaptations and structural adaptations.

The height of trees, a good idea in the summer, increases exposure to more extreme winter conditions. Unlike animals, trees cannot move. Unlike many other plants, they don't have the option to overwinter as seeds or rhizomes.

Bark provides fairly water tight barriers for most tree tissues. The bark also helps protect the tissues from abrasion and physical damage.

However, broad leaves are a major source of water loss, so our northern deciduous tree species drop them in the fall. Needles have proportionately less surface area than leaves. Needles also have better water loss control barriers. Nevertheless, all conifers lose older, more worn-out needles each fall. In the case of tamarack and larch, all needles are dropped.

Conifers have an advantage in needle retention in that they photosynthesize all year, as conditions permit. Deciduous trees must expend a lot of resources to grow new leaves each spring.

Leaf-drop is largely controlled by annual variations in photoperiod. The process begins in late July or early August. The chemistry is intricate but essentially involves pulling goodies out of the leaf and then forming a thin layer of cells where the leaf will eventually break off. Of course, the colorful fall season is the most obvious part of this process.

Ice crystals inside cells are fatal, but ice between cells is not. The "killing temperature" is that point where cells freeze. That temperature varies with species, populations, among individuals, and even between different tissues. Many central hardwood tree species hit their cold threshold in Michigan and Wisconsin, defining their northern range.

Trees acclimate by gradually increasing their cold tolerance. Cells increase lipid concentration with less complex lipids, break apart long protein chains, and water migrates out of the cell. Water outside cell walls will freeze first. As this water changes from liquid to solid, small amounts of heat are released. This energy helps prevent the cellular water freezing. This also causes more cellular water to move outside the cell.

The plumbing between broad-leafed trees and conifers differs considerably. Broad-leafed trees lose most of their ability to move water during the winter. Capillary action is broken after the first freeze. They need to re-grow these tissues in the spring. Alternatively, conifers better accommodate the physics of water. Tubes have special "check valves" that can allow resumption of water movement during the winter, should conditions be just right. The conifer cell walls are stronger than hardwoods, withstanding pressures up to 900 psi, so can better withstand ice expansion.

Liquid water in the winter can be found underground and in the snow. Loss of too much water, without replacement, will kill cells. This can happen in the winter under certain environmental conditions, especially among conifers. If roots cannot replace liquid water lost through needles, then tissues die. Winter kill or winter burn happens when needles lose too much water. It is not usually seen until spring, when the needles turn brown.

Another special winter problem can be frost-cracking. Thin-barked trees, usually hardwoods, exposed to both direct and reflected sunlight can experience bark temperatures into the 70 degree range, even though the air temperature is below freezing. If water moves into the warm underbark tissues, the tree will be vulnerable to rapid freezing and tissue death. As the sun sets, or moves behind something that casts a shadow on the tree, bark surface temperatures can drop too fast for the tissues to react. Ice crystals form inside cells, burst the cell walls, and tissues die. In the spring, the tissues dry-out and then crack, usually on the south

or southwest side of the tree. This is common with fruit trees.

Frost-cracking can be easily prevented by shading the trunk. A simple burlap wrap, or other solar barrier, will work.

Winter can also damage trees with heavy snow/ice loads. Certain tree species, such as firs and spruces, are quite flexible, reducing breakage from excessive weight.

High winds will abrade tissue surfaces, which increases water loss. Conifers with dense foliage can better resist wind abrasion. Some conifers exposed to regular strong winter winds, especially white pine, will develop crowns with interesting profiles.

Winter is a challenging time for all living things, including trees. Survival adaptations are both interesting and complex. Maybe something to ponder when you're house-bound on a cold January day?

Trailer

Bill Cook is an MSU Extension forester providing educational programming for the Upper Peninsula. His office is located at the MSU Forest Biomass Innovation Center near Escanaba. The Center is the headquarters for three MSU Forestry properties in the U.P., with a combined area of about 8,000 acres. He can be reached at cookwi@msu.edu or 906-786-1575.

If you have not been receiving email announcements or correspondences from PIF, please give us your current email address.

Hemlock Woolly Adelgid - Introduction

by John Schwarzmann
Forest Supervisor,
Board of Commissioners
of Public Lands

Hemlock woolly adelgid, *Adelges tsugae*, was accidentally introduced to North America and is currently a great threat to eastern hemlocks. Native to Asia, the first North American reports were in British Columbia, Canada in 1922 and in Oregon in 1924. Hemlock woolly adelgid was found near Richmond, Virginia in 1951. The insect is now found from northern Georgia to southern Maine, and from northern California to southeast Alaska. It has not been found in Wisconsin as of February 2010.

Currently, hemlock woolly adelgid has only invaded part of the range of eastern hemlock in the United States and Canada. On average, the insect has spread about 15-20 miles per year. Wind, birds, animals, and accidental movement by people cause this rapid spread. In Asia, the insect is found in very cold climates. Thus, it is likely to colonize most or all of the range of the eastern hemlock species.

Hemlock Woolly Adelgid - Biology

Adelgids are related to aphids and have a similar, complex life cycle. Hemlock woolly adelgid is parthenogenic, meaning that all individuals are female and produce offspring without mating. In North America there are 2 generations per year.

In the spring, adelgids hatch from a white, cottony egg sac that may contain as many as 300 eggs. The adelgids crawl around until they settle at the base of a needle, and begin to suck

nutrients from it. Their saliva is toxic to the tree, and eventually causes needle drop and twig dieback. They will usually remain at that feeding site for the rest of their lives. They become adults and then produce an egg sac in June and July.

The second generation hatches from these eggs, begins to feed, and then enters a dormant period for the rest of the summer. Being a cool weather species, feeding resumes in October and continues as long as weather conditions are favorable. These immature adelgids become adults during late winter and early spring. Some of these adult adelgids are wingless and remain on hemlock trees, whereas others have wings and fly away in search of a spruce tree in which to lay their eggs. However, in North America the offspring of these winged adults don't develop successfully because there are no suitable spruce species present.

Hemlock Woolly Adelgid - Impact

The two hemlock species found in eastern North America, eastern hemlock (*Tsuga canadensis*) and Carolina hemlock (*Tsuga caroliniana*), are susceptible and seem to have little resistance to hemlock woolly adelgid damage. Heavy infestations can lead to the death of the tree within 4 - 10 years, and trees are also weakened and made vulnerable to attack by other insects and diseases. Some trees recover, although the reasons are not well understood.

The hemlocks in western North America, western hemlock (*Tsuga heterophylla*) and mountain hemlock (*Tsuga mertensiana*), are suitable hosts but are much more resistant to damage than the hemlock species in eastern North America. Back in Asia, hemlock woolly adelgid does not cause significant damage to hemlock even though adelgid populations may become very high. This is due to host resistance and possibly natural enemies that help to keep the adelgid population down

Hemlock Woolly Adelgid - Symptoms

The white, cottony egg sacs of the hemlock woolly adelgid can be seen on the undersides of hemlock branches at the base of needles in late winter / early spring. Hemlocks that are infested will develop needles that yellow and eventually fall off, leaving dead, bare branches and thin crowns. Infested trees decline and die over several years.

Hemlock Woolly Adelgid - Prevention

Wisconsin does not have hemlock woolly adelgid, and we would like to prevent it from coming here. Quarantines and inspections are in place to stop the movement of potentially infested articles, and people should not move hemlock nursery stock, logs, or firewood from the eastern states where hemlock woolly adelgid is present. The pest was shipped to Michigan several years ago on infested nursery stock, but it was successfully eradicated.

Hemlock Woolly Adelgid - Management

In infested areas, the insect can be managed on individual trees through the use of insecticides, horticultural oils, and insecticidal soaps. Keeping ornamental hemlocks well watered and healthy can help them to withstand an infestation. Widespread insecticide treatment in forests is not practical, and salvaging dead or dying trees is the most common management technique.

One approach to managing hemlock woolly adelgid has been to introduce natural enemies from the insect's native range in Asia. One predatory beetle (*Sasajiscymnus tsugae*) has been mass reared and released in the eastern U.S. Its adults and larvae prey on hemlock woolly adelgid and help to reduce its numbers. In North America there are a few native predators, but they do not eat enough of the adelgids to prevent damage to hemlocks. *Laricobius negrinus*, a predatory beetle found in the western U.S., also preys on hemlock woolly adelgids and is currently being released in the eastern states.

Future Articles

PIF members are encouraged to submit articles, announcements, photos, and items of interest for future newsletters. Submissions may be forwarded to Margo Popovich at margo122050@mac.com or mailed to:

Partners In Forestry
6063 Baker Lake Rd
Conover, WI 54519

As a service to PIF members, contact Joe for special pricing on your needs for:

- Napoleon wood stoves
- wood finishes and preservatives
- garden and tree amendments
- grass seed for trails

IN DA WOODS

by Melanie B. Fullman, US Forest Service
Bessemer Ranger District, Ottawa NF

Flock of blackbirds landing

Mass flock

Mixed flock

HOW ONE THING LEADS TO ANOTHER

The other day, a reader of this column asked if I knew how birds in a flock can suddenly change direction, all at once and without any obvious leader? I'm guessing you've wondered the same (me too).

Ancient Romans believed that birds listened to the commands of gods. At the beginning of the 20th century, many American scientists hypothesized it must be some sort of extrasensory perception – a mysterious and mystical concept such as "natural telepathy" or a "group soul."

Only a few species of birds actually fly *together in* highly organized lines or clusters. Pelicans, geese, and other waterfowl form lines and Vs to take advantage of aerodynamic factors that save energy. But the most impressive flocks are those that fly in large, irregularly shaped masses, such as starlings, shorebirds, and blackbirds. They often fly at speeds of 40 miles or more per hour, and in a dense group, where the space between them is only a bit more than their body length.

Yet they make astonishingly sharp, drastic, undulating turns that appear to be entirely in unison. Imagine doing unrehearsed, evasive maneuvers in concert with all the other fast-moving drivers around you on an expressway – NOT!

Technological innovations, including high-speed photography and computer simulations, now enable biologists to view and analyze bird flocks as never before. This has caused renewed interest from other scientists, including mathematicians, physicists, and even economists. As a result, researchers are closer than ever to understanding flock dynamics.

One Good Tern (so to speak)

For centuries, we have known that when any group of animals works together, survival increases. More eyes and ears mean more opportunities to find food and better chances of detecting a predator in time.

Being in a crowd pays off. Individuals are almost always more vulnerable by themselves. Crowds can also do bewildering things that a small group or singles cannot (not too hard to recognize how this applies to people, as well). By turning rapidly or tilting a bit, some birds are even able to shift the appearance of their plumage from dark (their upper parts) to light (their underparts). This creates a flashing effect that can startle or confuse predators.

In 1971, a British biologist coined the term "selfish herd" to describe how each member of the flock, herd, or school (of fish) actually acts out of their own self-interest. When a predator approaches, everyone in the group moves toward the safest place – the middle – to reduce the chances of being caught. Observations of juvenile shorebirds suggest it may take them some time to get the hang of it because they must learn to form cohesive congregations. Natural selection dictates that birds least able to go with the flow or the slowest learners are most likely to be eaten first.

While this self-interest may explain the dynamics of flock motion, such as density, it doesn't explain how each member of a large group gets the

information it needs to move in synchrony. There's just no way every member of a flock can see a fast-flying falcon at the same time. How, then, do they know what direction to turn and when?

Deserves Another

One clue came from studies of fish. Many schooling species maneuver as intricately as cohesive flocks of bird. AND, they're much easier to study, since they can be watched and photographed from fish tanks. In the 1960s, a Russian biologist found schools of fish can successfully avoid predators if each fish simply coordinates its movements with those of its neighbors. Even if only a handful of individuals know where a predator is coming from, he found they could guide a huge school by initiating a turn that their neighbors emulate—and their neighbors' neighbors, and so on. Unlike linear flocks of geese, which have a clear leader, clusters are democratic. They function from the grassroots; any member can initiate a movement that others will follow.

Through a frame-by-frame analysis of high-speed film, scientists have learned that turns flow through the group like a wave, radiating out from the initiation site. These "maneuver waves" can go in any direction, including front to back. In general, flocks/herds/schools respond to members of their group that turn in, rather than turn out and away. Individuals that turn away run the risk of being separated and thus, picked off by the predator. So their friends generally don't follow them. This is the key to preventing indecision by the group, enabling it to respond rapidly.

Flight Plan

In recent years, computer programmers have begun to create models that show how simulated animal groups respond to the movements of individuals within them. Turns out, there are just three basic principles: each animal needs to 1) avoid colliding with its neighbors, 2) be generally attracted to others of its kind, and 3) move in the same direction as the rest of the group.

The result is like "the wave" that rolls around sports stadiums. If you wait for the guy sitting next to you to move, you will be too slow. So you watch the whole section next to you and then 'do the wave.' Birds and herds and schools of fish do the same, keeping their eyes on a number of others, not just their nearest neighbors.

Video footage of a flock of sandpipers has provided further proof. "A wave was propagating through the flock at least three times faster than could be explained if they were just watching their immediate neighbors," said researchers.

Plug the three basic principles into a computer model and you can create "virtual swarms" of any creature. The swarms can change density, alter their shape, and turn on a dime, just like real animals. The makers of movies, such as *The Lion King* and *Finding Nemo,* have used this type of software to simulate realistic-looking movements in large groups, such as stampeding wildebeest and drifting jellyfish. Who knew?!

Using software borrowed from the field of statistical mechanics, physicists have also been able to map the three-dimensional structure of flocks. They've found that no matter how dense a flock appears from the outside, its members are not evenly distributed. Instead, each member has a good deal of space behind and in front. Like drivers on a freeway, many birds don't appear to mind having neighbors nearby on their sides – or above and below – as long as they have open space ahead.

That makes sense, since the presence of a clear path in the direction of travel minimizes the likelihood of collision should a bird need to shift course abruptly. But what's nifty about this spatial asymmetry is that researchers have been able to use it to calculate the number of neighbors to which each bird pays close attention. Surprisingly, each bird always pays attention to the same number of neighbors (usually 6 or 7), whether they're close or farther away. It's not yet known whether watching their neighbors is all they do or just one piece of the process.

Copying Nature

Thinking back to the article about biodiversity in last week's column, I couldn't help but smile when I heard a news story earlier this week about automakers experimenting with the latest on-board computers to improve driving safety. The preferred design has the vehicle's computer track the location of vehicles around them. Sound familiar? Funny how the bird brains figured this out thousands of years ago!

So whether you relish the scientific analysis or are just awed by the mass maneuverability of flashing fish, stampeding beasts, or aerial acrobats, the best place to find them, and me, is in the woods. Enjoy the show.

Sure wish I'd taken pictures when I've seen masses of birds; instead, I tend to just stand there in amazement.

STEWARDSHIP FUND

Recently, at the order of the governor, Wisconsin DNR has curtailed the Stewardship Fund, pending review. Partners in Forestry board of directors is very concerned about this, and we wish to prepare a well thought out response. Please give your input to Joe very soon, as our members views are paramount to drafting a response from the organization. Our concerns are very much related to the economic and public benefits the Stewardship Fund contributes to the state, especially the north, where forestry and tourism are vital to the livelihood of many residents. When the economy recovers the cost to achieve the goals of the fund will escalate with land values. Please review the last issue of Partners News for specifics on the Stewardship Fund.

Thank you for being involved!

UPCOMING EVENTS

Forest Fest 2011 August 6th, 9:00 am - 4:00 pm at Trees for Tomorrow

A CALL FOR VOLUNTEERS

As you know, Partners In Forestry is partnering with Trees For Tomorrow in the planning of the first annual Forest Fest to be held on the Trees For Tomorrow campus on Saturday, August 6, 2011. This is going to be a huge event, folks. There will be activities for all ages and all interest levels to learn about and celebrate our northern forests. It is anticipated that we will have as many as 1000 attendees visiting during the day. As such, we are in need of PIF volunteers to help on the day of the event with everything from the managed forest tours that PIF will be providing, to manning the PIF booth, to directing traffic and giving directions. We have promised the Trees For Tomorrow staff that our membership will be willing to step up to help in a variety of ways. So, considering that you will want to attend this free event anyway, perhaps you would consider pitching in to help out for a part of the day. Maggie Bishop, director of TFT has promised special tee shirts for all Forest Fest staff and volunteers. Anyone interested in volunteering to help on August 6th, please contact Rod Sharka at 715-547-6493 or resharka@gmail.com to sign up.

Also, if you have any special forest products craft, skills or services to show off, demonstrate or sell, you are encouraged to call, email, or visit the Forest Fest website to register for a booth/space on this day of forest celebration. Note that all proceeds from this event will be used for student scholarships.

TreesForTomorrow.com/forestfest.htm
Learning@TreesForTomorrow.com
715-479-6456

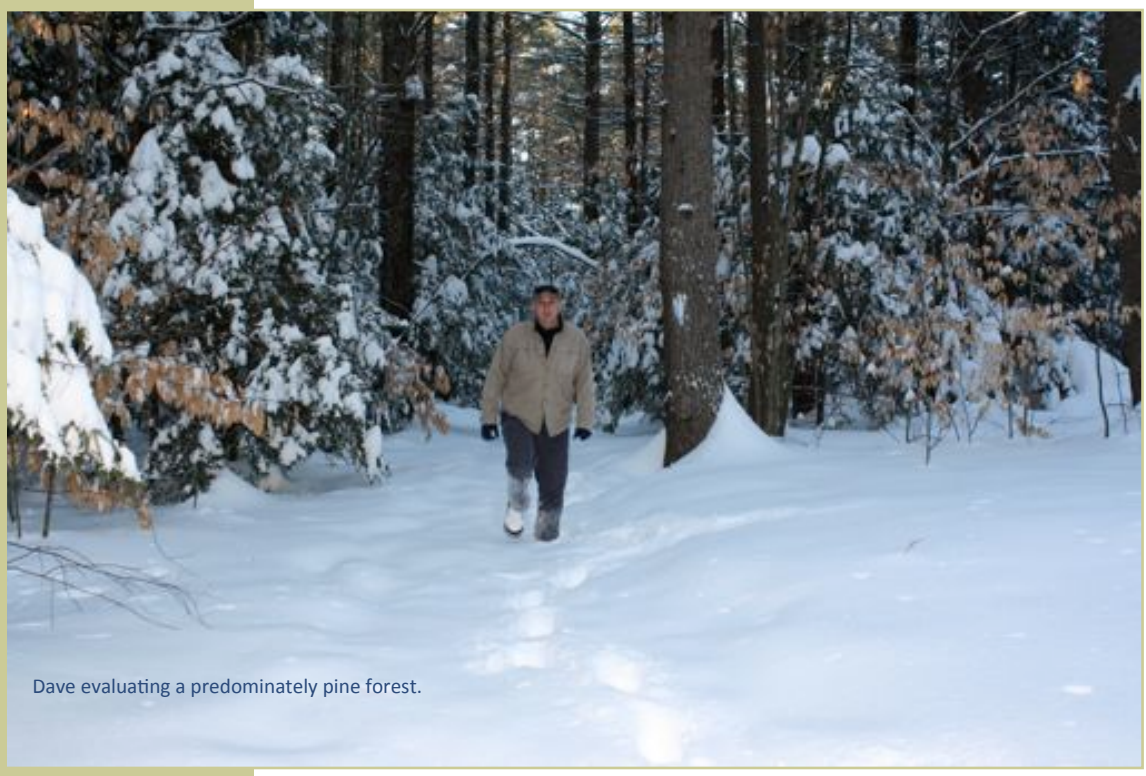
Thank you in advance. Your active participation is greatly appreciated.

Comments by Joe: I met Dave in 2009, shortly after I had negotiated a significant timberland purchase, so we had easy discussion points. Although I had been aware of LandVest for over a decade, I was pleased to find Dave to be very professional and yet relate so well to the average woodland owner. Dave immediately showed an interest in PIF and joined our COOP over a year ago. Many of us value our woodlands for all the benefits they provide, including long term investment value. It is from that perspective that I attempt to learn the workings of the large ownerships, because the large timberland owners yield great influence in marketing and land values which in turn affect us as family owners. Some of us even own land that was owned at one time by one of the large owners.

INTERVIEW WITH DAVE SPEIRS

Timberland Marketer with Land Vest

by Joe Hovel, President of PIF



Dave evaluating a predominately pine forest.

PIF: *Well Dave, you represent what seems like "big one" when we talk about timberland management and sales. Certainly out of the scope of many of our members, but I really wish to convey to our members the difference between what you do versus. buying or selling from a local real estate agent who most often have no forestry experience. I also appreciate your background in forestry, so please begin by telling us a little about your developing career from your forestry beginnings.*

DAS: I am a forester by trade. I graduated from the University of Maine's Forestry program and have been working in the industry since. I spent a summer in California working for the forest service, and another several months in Montana working for Plum Creek as a forest technician. From Montana, I found my way back to Maine with a full time job with Plum Creek as a Senior Resource Forester. {Editors note; Plum Creek is a Real Estate Investment Trust and has been the largest land owner in the lake states} As a Senior Resource Forester, my primary responsibilities included all aspects of day to day land management activities. It was a role in which I wore many different hats and gained a tremendous amount of experience in all aspects of forest management. In 2008, in need of a change, I found my way to LandVest as a Timberland Transaction Specialist. What sets LandVest Timberlands apart from other real estate brokerage firms is clearly our experience and understanding of the product we are selling. All of us in the Timberland Marketing division have that Forestry background. This lends a high level of credibility to the products we are representing. Additionally, because of our significant management presence in many regions, oftentimes we can stand behind our representations through management after the sale.

PIF: *Tell us a little about LandVest, at least the timberland division. Are you in the lake states to stay?*

DAS: LandVest has been managing, consulting, and marketing timberland investments for over 40 years. We got our start in the Northeast and much of our business, including estate brokerage and real estate consulting, is still in the Northeast. We currently manage approximately 1.5 million acres in the New England, New York and the Mid Atlantic. Our timberland consulting and timberland marketing departments are involved in projects throughout the country and, on a limited basis, internationally. These businesses lend themselves to ranging farther afield and are often the spearhead for growing the business. To that point, we have been a party to several large transactions in the lake states over the past few years, and we are working to generate more transactional business in the region. If we found the right situation, we would consider providing management services in the region as well.

PIF: *If an owner of timberland wishes to seek help from you, please give us a summary of what you do…..I mean the specifics of assisting the owner to achieve their due value.*

DAS: From a timberland marketing perspective, there are a several ways in which we bring value to the table; here are a few of those ways.

- We thoroughly understand the property before it goes on the market. We assemble the available data and package it to present a complete and transparent dataset to a potential buyer. During this process we often uncover gaps in the data or issues relating to the property. We help sellers identify and fix these problems (such as lack of access) and fill in gaps in their data which could otherwise be troublesome during the closing process. This completeness and accuracy of the information we represent, inspires buyer confidence. Buyers can quickly evaluate the property as a possible acquisition based on the available materials.
- We understand value. When we evaluate a property, we recognize each element of value that is specific to the property and understand how each value interacts with the overall property. Furthermore, we are able to articulate those values to potential buyers.
- Our significant presence in the marketplace facilitates access to existing and new investors, and engenders buyer confidence. With timberland marketing projects continuously underway across the United States we are constantly attracting capital to the asset class.

- We are equipped to provide the service for landowners. Most landowners, even large landowners don't have the resources available and dedicated for this type of work. In that sense we can step in and do this service that landowners require from time to time.

PIF: *Give us a little insight into the value of a timberland investment. I sometimes wonder, as deeply as our own family is invested in wooded land, if there may be any incentive for PIF to attempt to organize a member based investment group? Can a young retiree expect to see a return to satisfy the needs of their investment? How do you address a potential buyers questions concerning their investment? At least in how it performs compared to the volatility of other funds in recent years.*

DAS: In its purest form, a timberland investment is highly dependent on two factors; Size of parcel and Timber Capital Value (TCV). In very general terms, the larger the parcel, the greater the discount as it relates to TCV. The converse it also true. Most timberland investments however carry other values or limitations. Are there development opportunities, is there lease income, is the timber quality exceptional, does the property have legal access (if it does not, this can be a huge negative adjustment), are there operability limitations, is the property eased or otherwise encumbered? All of these attributes, among others, need to be considered and factored in to the value of a timberland investment.

From an investment perspective, timberland has performed very well in the past 2 decades. It has only been in the last 20-30 years that timberland has emerged as a relatively mainstream investment. Prior to the vertical disintegration of many of the paper companies and sawmills, timberland was a resource and often a cost center. Since that time, investors, through recognizing efficiencies and value opportunities, have seen very steady and solid performance of their investments. NECREIF, the only index of timberland investment performance tracks returns of timberland over the past 10 years at 8% annually. In the last couple of years, timberland, much like nearly all asset classes has found itself in negative territory (5-15% is a common estimate of this retraction, NECREIF 2009 returns are -5%). Most other assets classes suffered far worse. Timberland ownership serves the purpose of owning a hard asset and many investors think it is a good place to preserve capital and hedge against inflation. {editor: especially so for a family ownership who enjoys the lands aesthetics and opportunities}

Actual returns from a timberland invest are derived from these major contributing attributes.

1. Non-perishable biological growth contributes to value and is unique to timber. Value can be stored on the stump if markets are not favorable.
2. Cash flow from harvesting, leasing, out sales, and other income producing activities can provide ongoing or periodic returns.
3. Capital appreciation of land and timber products over time. It is important to note this is only realized at time of sale.

PIF: *My first experience with LandVest was 11 years ago in the North East Kingdom of Vermont. LandVest, with Lyme Timber Co. investment, was coordinating a conservation sale in conjunction with the Vermont Land Trust. More recently I was enchanted with the Nature Conservancy deal in the Adirondacks, and noted that LandVest played a role in that as well. Please explain the evolution of conservation easements and LandVests' experience in WFCE's. Many of our members are very interested in and committed to long term conservation, and some have demonstrated that with Conservation Easements.*

DAS: Working Forest Conservation Easements (WFCE's) have evolved in complexity and migrated over time (at least in my perception). LandVest has been dealing with WFCE's for many years, both on our management side, where we currently manage approximately 500,000 acres of eased land, (1/3 of our total management) and through numerous transactions involving WFCE's. The Northeast including New York seems to have been a hot bed for easements beginning in the 80's. They became a mechanism of cash flow for landowners to trade, in most cases development rights. Various conservation organizations, state and federal governments raised money

from private sector contribution, bond measures and among other allocation. The case in the Adirondacks referred to in the question evolved when Finch Pruyn paper sold 180,000 acres in fee to The Nature Conservancy (TNC). TNC encumbered the land with a conservation easement and then hired LandVest to market 90,000± acres. The remaining acreage is still owned and operated by TNC.

In recent years, the lake states have seen several conservation easements appear. Minnesota, for example, has dedicated 3/8 of 1 % of their sales tax to land conservation. This has resulted in several hundred thousand acres becoming protected with WFCEs in the past few years. Another large landowner recently has placed an easement on some of their lands in the UP. I suspect the trend will continue, albeit, somewhat more slowly during this recession.

PIF: *We are hearing these days a lot about TIMO's and REITs, can you explain what those are and how those work? How could a group of investors organize to invest in timberland?*

DAS: Much of the timberland across the country, and increasingly around the world, is held by investors, particularly institutional investors and high net worth individuals and families, opposed to paper companies and sawmills as explained above. REIT's (Real Estate Investment Trusts) are a type of corporate structure whereby public stocks are offered. REIT's invest in income producing properties and distribute a significant portion of the profits in the form of dividends to shareholders. REIT's are most commonly associated with malls and commercial buildings. Plum Creek, Rayonier and Potlatch are the three best known timberland oriented REIT's.

TIMO's (Timber Investment Management Organizations), such as The Forestland Group, Molpus Woodlands Group and Regions Morgan Keegan Timberlands, act more like investment funds. The TIMOs provide the administration of private and institutional funds for the purpose of investment in timberland. They attract capital, seek out acquisition opportunities, execute the acquisitions, manage the timberlands during the investment period and finally divest the investment prior the end of the fund. Most funds have a predetermined duration such as 10, 15, 20 or 25 years.

PIF: *We all know that a conservation easement lowers values of a property. What can a committed conservation owner do to help add value? Certification? Management leaning toward higher value saw timber?*

DAS: I would not necessarily say that a conservation easement lowers the value of a property, rather it reassigns (sells [or donates to a Land Trust]) a certain defined set of rights to another. Think of property ownership as owning a "bundle of rights." If you own your land totally unencumbered in fee ownership, you own the entire bundle of right. However, you may decide to sell certain rights such as the mineral rights, or the timber rights, or the development rights or the recreation rights. Selling a conservation Easement is just selling some of the rights in your bundle. Like any deal, the landowner and the easement buyer have the ability to negotiate what is sold and for what price. Foresight and planning by a landowner prior to the execution of a conservation easement can help maximize value for the landowner. Understanding the value of the rights you are relinquishing is important if financial performance of the ownership is a consideration.

Mixing work with pleasure. Timber (dog) and Dave looking at the sapling regeneration in a hardwood forest. Northern Maine

LETTER TO PIF MEMBERS

from Mike Kispert

Dear Fellow P.I.F. members,

Mike with his son, Kurt

My wife and I are members of P.I.F. and owners of 455 acres of forested property, 280 of which has been in the old forest crop law program in Iron County, WI. Forty acres on the 280 acre Iron County parcel is one which we had plans to someday build a retirement home. It is the most attractive forty out of the seven forties in this forest crop law program with a schedule to be thinned. We were very concerned about how the logging would affect the natural beauty of this forty as it consists of beautiful natural moss covered rock formations and mature mixed hardwoods. It has various elevations making bluffs, valleys, ridges and ravines that are breathtaking views if you are willing to attempt the hikes. The thought of loosing this to chain saws and machinery in the process of the mandatory and very necessary scheduled cutting caused us both to have that sick feeling in the gut. The reality of returning to our carefully selected place of spending the later years of our lives being unrecognizable was just unbearable. I would like to briefly share some of our experiences in carrying out the scheduled cutting on 40 of the 280 acres scheduled for 2004. The 40 acres scheduled for cutting is one out of seven and the only one fronting on a road. This same forty has a bluff in the center elevated 200' above the road with no roads accessing the back six, leaving 240 acres virtually inaccessible by vehicle. The state forester in Mercer WI was very helpful with marking a road through and over the sudden high elevated rocky terrain as well as giving us some direction in proceeding with the scheduled cutting. We had always used a road through the adjacent county land to access the back 240 acres. This new access road is also a result of the completion of the logging project. The new road in and through this forty made it possible to get started with a small log cabin that would allow us to enjoy much more recreational use on our wooded land. Our plans to proceed with the cutting were to find a logger to work directly with. We started by contacting and interviewing many different loggers that are listed with the state. We spent many hours and days trying to find a logger that was interested, qualified and that understood exactly what we wanted as a finale result. As absentee land owners, four hours away from the logging site, this was very important to us. This process proved to be very interesting, educational, frustrating and sometimes confusing. We found some to be very professional and committed, some to be just the opposite. Many of the people that we found to be the right match seemed very interested but their priorities were with other commitments to forestry consultants that they worked with on a regular basis. This made it clear to us that we needed to seek professional forestry consultation. After becoming members of P.I.F. and discussing things with Joe Hovel, we continued our search. Joe said we were going about things in the right direction and offered some other options, such as a forest consultant. This was also recommended by state and county foresters. It was at this point that we began looking at our options with the various forestry consultants. After several discussions with several foresters we knew that we had found the perfect match for our project. It wasn't long into my conversation with Michael Lane, a forestry consultant from the Ironwood / Hurley area before I was convinced that he was the right man for the job. Mike's genuine passion of working with woodlands and forestry was certainly obvious. You really get that sense of honesty when you are talking to someone about something that they have a genuine passion for. I knew he understood our concerns and that he was the guy to

help us get our mandatory scheduled cutting project in motion. Mike has been a forester for more than 20 years and has developed a team of quality people to help get the project done in a timely and efficient way. Mike works with several loggers that know how he wants to get things done and are willing to travel anywhere in Wisconsin / Michigan.

Rugged topography in the Penokee Hills

Some of the services provided to us were things like:

*Timber Sale Prep: The actual setting up of the timber sale, marking the trees to be cut, putting in any needed property lines, talking to and meeting with us as well as the WDNR forester to make sure all requirements were being met. The selling of the timber sale to a reputable logger, doing the timber sale contracts between the logger and us as the landowner. Getting the required security and advance stumpage payments to us.

*Timber Sale Administration: Monitoring the cutting of the sale to assure it is being done in accordance to the timber sale contract.

*Cutting Reports and Notices: The cutting notice was filled out for the WDNR, letting them know when the cutting started as well as the amount of volume expected to come off the sale. The cutting report was done when the sale is complete listing the entire volume that was cut from the timber sale and then turned into the WDNR forester in charge of that sale.

* Timber Sale Accounting: While the sale was in progress all scale tickets as well as stumpage payments to us as the landowner went through AMF accounting system. Upon completion of sale received a final accounting statement of all transactions that took place during the timber sale.

I think that one of the most important things with the above mentioned is that during this whole process we as the land owner were kept involved in the whole process. A phone call once every week kept us informed of the progress of things. Mike always encouraged us as the landowner to be a big part of this whole process. Mike also made sure the WDNR forester in charge of the sale was informed, when the sale started, the cutting progress on the sale, etc.

I believe the money invested in hiring the forestry consultant was money saved in a big way as well as getting things done professionally opposed to attempting this project on my own. Unless you have a logger that you know you can trust and are very familiar with I would recommend the forestry consultant. Our forestry consultant is a mediator that keeps the delicate balance, works with and coordinates the complete operation between the land owner, logger, state and county foresters, and timber buyer. Our Forest Crop Law timberlands has been scheduled for another cutting next year and we are in the process of planning the project with Mike Lane for the winter of 2011. If anyone is interested in or has a need for forest consultant service, I am including contact information for Mike Lane:

1011 Charles Street
Wakefield, MI 49968
906-364-0725

Mike's cabin on a hilltop

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6063 Baker Lake Road
Conover, WI 54519

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