

# WONALANCET OUT DOOR CLUB

Newsletter



April 2012

CARING FOR THE SANDWICH RANGE SINCE 1892

## The Woodland Jumping Mouse

Chris Conrod

Perhaps you have seen one while hiking on a mountain trail along a brook: a small, tawny ballistic missile arcing above the hobblebush on a trajectory that can cover six or more feet. You might wonder if it was a wood frog on steroids. Or maybe your cat has left one on your doorstep: a mouse-like rodent with abnormally large hind feet and long tail. These brief and uncommon encounters are all that most people get to see of the woodland jumping mouse. Farmers may be familiar with the smaller, drabber cousin, the meadow jumping mouse, but the woodland jumper is a shy, retiring, forest animal that prefers to go about its business beneath the protection of low, dense cover.

On the whole, the scientific community knows little more about the species than the layperson; at the very least we can say that the woodland jumper is understudied compared to most other mammal residents of northeastern America. Woodland jumpers lack the essential "economic importance" needed to obtain funding for ecological studies. On one hand, humans have found no use for the critters, so we don't need to study better ways to exploit them. No one wants to harvest their pelts and their gall bladders are not suspected of being an aphrodisiac. On the other hand, they never get in our way. They don't invade houses and chew electrical wiring, they don't steal our grain and they don't dig holes in our lawns. We don't need to study their life history in an effort to devise a means of controlling their abundance.

These crafty critters have other tricks to discourage ecologists from prying into their personal lives. Unlike their neighbors, the deer mice (the darlings of the mammal physiologists and ethologists), they don't do well in a laboratory setting. They are high-strung and nervous, and if a pregnant female is captured and held in captivity, she will most likely eat her young. For the field biologists, the woodland jumpers employ two discouraging tactics. For half the year they are in

hibernation two feet below ground and unavailable for inspection. And then, when they finally wake up in early May, the entire jumper community is apt to pack up and move to parts unknown. More than one unlucky grad student has abruptly discovered that his/her thesis fieldwork has ended a year ahead of schedule.

My introduction to the woodland jumper was similar to that of many other ecologists.

It was entirely unintended. The ornithologists sent me into the woods to prove that those nasty squirrels were eating all the warbler eggs during the years following every bumper beechnut crop. It just so happened that my assigned study area was a hotbed of jumper activity. Although they impeded progress by monopolizing the live-capture traps intended for the squirrels, I quickly developed an affection for the jumpers and incorporated them into a secondary component of my study. My scientific motivation:

They're so cute! And I can cite a source to back me up. W.J. Hamilton, Jr., in *The American Midland Naturalist*, unequivocally states, "It is the handsomest of the eastern forest mammals."

In my experience, it doesn't matter which organism you choose to study as a biologist. Once you get into it, you'll find it to be a fascinating creature. The woodland jumper is no exception. It has many quirks and mysteries that make it worthy of study simply to quench fascination and curiosity. And every now and then the jumper grazes the periphery of current ecological research, so we are slowly learning more about the woodland jumper's life history and ecology. I'm pleased to share my myophilia with you.

**Is it really a mouse?** Of course it is. It's the woodland jumping MOUSE, isn't it? The problem with this answer is that common names do not always follow phylogeny (the evolutionary line of descent). In order to determine exactly



how much of a mouse the woodland jumper is, we need to follow its phylogeny down from the higher taxa (hierarchical groups). The jumper is a rodent, as is a mouse. The jumper is a myomorph (mouse-like construction), as is a mouse. At this point we could acknowledge that the jumper lacks the major character that is supposed to define the myomorphs – its skull structure is actually more like a porcupine (hystricomorph) – but then we'd have to talk about convergent evolution and use a whole lot of techno-garble. Not a pretty picture. And besides, all the taxonomists and systematists (those who say, “I don't care what you call it as long as it's monophyletic.”) agree that the woodland jumper is a myomorph. These people almost never agree. Let's not make waves.

From here on, the woodland jumper diverges from the “true” mice (old-world and new-world mice: house mouse, Norway rat, deer mouse, and others). What this means is that the woodland jumper is less of a mouse than voles, lemmings, muskrats, gerbils, hamsters, zokors and blind mole-rats, not to mention a diverse myriad of rodents that have the word, “mouse” in their name. The woodland jumper is actually closely related and similar in appearance to the jerboas, desert rodents of North Africa and Asia. They share the large hind feet, the long tail, the ability to clear long distances in a single hop, the ability to enter torpor (the jerboas use it to estivate during periods of high temperature), and low evaporative water loss. Jerboas and jumpers also share food preferences, which focus on insects, small seeds, and green plant matter. The woodland jumpers have one other favorite food, which we will discuss later.

***What is a descendent of an Asian desert rodent doing in New England?***

Surviving very well, thank you. Paleontologists believe an ancestor named *Megasmithus* migrated to North America about 5 million years ago. Whether or not the jumping mice are descended from the *Megasmithus* that migrated or from the ones that stayed in Asia is debatable because there is one jumping mouse in China, as well as three species in North America. But either way, we know that the woodland jumper evolved to its present form in eastern North America at least 0.75 million years ago.

The timing of the woodland jumper's development occurs right in the middle of the Pleistocene ice ages. An odd climate for a desert animal, don't you think? But it was probably the adaptations to desert conditions that allowed the jumper to adjust to a seasonal temperate climate. The abilities to enter torpor, which its ancestors used to wait out the hot desert days, and to minimize evaporative water loss – always handy in an arid climate – combined to allow hibernation during winter months. The distribution range of the woodland jumper closely matches the combined ranges of eastern hemlock and balsam fir. Most jumpers are found in spruce-fir and hemlock-hardwood forest communities. Fossil evidence indicates that the jumping mice followed these plant communities as they moved south and north during the glacial and interglacial periods.

***Why is an ex-desert, water-conserving rodent attracted to water?*** Good question; I wish I knew. You would think that such an animal would, for the most part, be indifferent toward ponds and streams. However, there is a long list of papers in the early literature that report finding woodland jumpers beside waterbodies. The jumper-water association became a

standard part of the its habitat profile until the 1960s, when two separate researchers questioned the water association and posited that jumpers are not attracted to water but rather to low, dense cover, and that type of cover is often found beside water. For the next forty years, the water vs cover debate continued among woodland jumper ecologists (all three of them). But to my amazement, no one bothered to go do a one-on-one test in the field (forest).

As part of my fieldwork, I had about six hundred jumper captures spread over 288 stations. The station distance to stream ranged from 1 meter to 150 meters. So I went out and measured the cover density at each station, lined the two data sets up against a wall and lobbed statistical voodoo spells at them. So, now we know. At least we know for my jumpers at that specific location during that specific time period. Jumpers select both water and cover (cover is most important from ground level to ½ meter above the ground) but waterfront property is the most valuable real estate. When the choicest, dense-cover waterfront lots fill up, the jumpers prefer sparser cover near water over denser cover further away from water. Late in the season, when the youngsters move out of the burrow and jumper density is higher, they have to settle for areas far from the stream and then they base their choice on cover density.



***C.C. channels Beatrix Potter! Hypothermic W.J.M. captured in winter, being re-warmed by the author. Wow -- they really are cute! (Frameable color photo on website)***

All well and good, but this doesn't answer the more important question: Why? They don't need the water for metabolic needs; their food provides all the water they need. The water doesn't offer them protection or a means of escape. Although jumpers are capable of swimming – in fact there are two reports of them swimming underwater – the streams on my study site were never more than two feet wide or six inches deep, usually less. Their predators wouldn't hesitate to go in after them. That leaves only one of the big three habitat needs: food. There must be something they eat that is associated with water. It's possible that the foliage, fruit or seeds of a water-loving plant could entice the jumpers down to the water's edge, but I doubt that's the case. Most of my study area was pretty steep and the upland vegetation

continued right to the bank. There wasn't much in the way of hydrophilic plants. That leaves the invertebrates. About one third of the woodland jumper diet consists of invertebrates, with insect larvae constituting the major portion. Although insect larvae can be found in all habitats, I dare to posit that aquatic communities have the highest density. But that's as far as I'm taking it. I'm not keen on ripping open stomachs and I'm not up to the challenge of identifying partially digested larval remains.

***What's with the gypsy lifestyle?*** Maybe they want to stay one step ahead of ecologists intent on performing stomach content analyses. A common theme in long-term woodland jumper studies is the observation that the jumpers don't always stay in one place for long; not just as individuals but as entire populations. The unlucky record holder for this phenomenon is probably Carolyn Sheldon, who had to search for her missing jumpers at the beginning of the season for each year of her four-year study. In my study, jumpers were the most abundant mini-rodent prior to 2007. By August of that year, they were entirely gone. Robert Wrigley stewed over this phenomenon in his landmark 1972 treatise, but indecisively concluded that it was due to unknown "environmental factors in a species which has relatively specific habitat requirements." It's possible that there is a suite of environmental factors, any one of which might cause the woodland jumpers to relocate. I can suggest one factor.

The typical mini-rodent community found in hemlock-hardwood forests includes deer mice, red-backed voles and woodland jumpers. Researchers studying small mammal communities sometimes note complementary abundance numbers between woodland jumpers and the other two species. When one is high, the other is low. It has also been observed that increased deer mouse abundance can change the feeding habits of the jumpers. Each of the three species has its own disposition or personality, which becomes apparent to anyone who has handled hundreds of captures of these critters. Deer mice are laid back and mellow; you can sometimes get them to sit unrestrained in the palm of your hand. Red-backed voles are pugnacious; they're always ready for a fight. Woodland jumpers are the most hard-wired; their response to anything that doesn't seem right is to jump. It doesn't matter if they're being held by the scruff of the neck with their legs dangling three feet above the ground; they try to jump anyway. The answer to every problem is to jump.

Now imagine that you are a woodland jumper waking up from hibernation. You stumble out of your burrow to find that things have drastically changed during the six months you were sleeping. The populations of the deer mice and red squirrels have doubled, there are more red-backed voles than last spring and seventeen chipmunks have shown up from who knows where. (We can credit this all to the beechnuts, the reason I was out there.) You can't move ten feet without bumping into something that causes you to jump. You're too busy jumping to get any work done. Your potential breeding partners are too busy jumping to meet up with you. Ecologists call this interference competition. I don't blame the jumpers for leaving. I would have loved to go looking for them (they were probably down in the balsam and hemlock swamp, where there were no beechnuts) but I had my hands full working on the ornithologists' vendetta.

***Do jumpers serve any useful ecological function?*** That's a dangerous question for humans to ask. It could get turned right back at us. For the woodland jumpers, we could always resort to their position in the food web; they convert the nutrition found in plants and invertebrates into furry packages of protein and fat that fuel the predators. Every time you see a fox with its glorious pelage or hear the haunting call of a barred owl, you can thank in part the woodland jumping mouse.

But the jumper provides a specialized service that we can arguably rank as a much higher ecological function than shunting nutrients through the food web. The jumping mouse is a voracious mycophagist; it eats fungi. In particular, it eats hypogeous fungi – fungi that exist entirely below ground, including their fruiting bodies (known to most of us as truffles) and, consequently, the spores produced for reproduction. As you can imagine, wind dispersal is not very effective for hypogeous spores. Water movement through the soil can transport the spores a short distance but for long-distance spore dispersal, the fungi are dependent on mycophagists. This is important because many of these fungi form necessary symbiotic mycorrhizal associations with plants, both herbaceous and woody, including all the trees in the forest. This symbiosis provides the plant with improved access to soil nutrients and water. Without the mycorrhiza, a sapling would stand a poor chance in the stiff competition to reach the canopy. You can read more about mycorrhizal fungi in our intrepid editor's article in the November 2007 Newsletter.

A number of the woodland jumping mouse's neighbors eat hypogeous fungi; most notably, the flying squirrels and the red-backed vole. However, these and other members of the squirrel and mouse families tend to be generalist mycophagists; they sample a wide variety of fungi from all the fungal taxa. The jumper is a fungi specialist and it devotes a greater effort to foraging for fungi. During the summer months, hypogeous fungi are found in 70 to 95% of all jumper samples and account for as much as 70% of the total food volume. The majority of these fungi are from the phylum Glomeromycota, a group of obligate plant symbionts that form an incredibly intimate association with tree roots (arbuscular mycorrhiza) and produce glomalin (again, see the November 2007 Newsletter for more details). Glomalin increases soil organic matter, binds soil particles, retains water, reduces erosion, boosts ecosystem productivity and sequesters carbon. It's the best innovation since Gore-Tex, and the woodland jumper appears to be the #1 disperser of Glomeromycota.

***So there you have it.*** . . . Nestled beneath the streamside hobblebush is a shy, handsome rodent of Asian descent that doesn't cause us any trouble, that consumes insects before they can bite us, that is willing to give up its home to its neighbors, and that is quietly working toward a healthier ecosystem and mitigating the effects of global warming. We all owe the woodland jumper our gratitude. I suggest you sit on the stream bank along about dusk and thank the first one you see. If you don't have the patience, you can just leave a gift. It's especially fond of raisins.

*(Photos by Chris Conrod, with more on the website.)*

# TALES FROM THE TRAIL ADOPTERS

## Part I

*“The trail maintainers consisted of a small oligarchy of organized groups in the northern ranges and a heterogeneous mobocracy of individuals in the southern part of the region.”*

I guess you could think of a trail as a work in progress. Personally, I think of it in the other direction -- as a demonstration of entropy at work (See: Second Law of Thermodynamics). All human creations degrade, and an enormous fraction of human endeavor is devoted to fighting the degradation. Any home-owner will understand. (Actually, any inhabitant of a human body will understand.) And trails, where the human hand has lain pretty lightly on the land, degrade at an amazingly rapid rate. They erode from water and the passage of thousands of booted feet. They get covered by debris. They get blocked by falling trees. And yet. . . when we hike our trails, there they are; clear, dry (more or less), and undegraded. So, following the dictates of the First Law of Thermodynamics, we deduce that energy is being invested in trail maintenance, and it sure isn't coming from Mother Nature, who is working in the opposite direction, hoping to turn the trail back into forest. Of course, we are all picking up debris or kicking at the leaves blocking a water bar as we hike. But the big work is being done by a small group of unsung (or at any rate, very faintly and rarely sung), and mostly invisible heroes: the Trail Adopters.

Every WODC trail has been adopted by one or more folks and, over its lifetime, quite a few folks. (Keep in mind that some of our trails are well over a hundred years old, and some -- like Old Mast Road -- date from colonial times.) Since one does not become a trail adopter for fame (we won't even talk about fortune), often the officially listed TA has dropped off, and an unsung volunteer has taken over the task. There are even occasional orphan trails, hoping to be adopted or, at least, fostered. We should note here that WODC is not a club bound by formality and legal contracts. Chris Conrod writes, “I learned that I was the adopter of the Lawrence Trail when I read in the Newsletter that Dana Steele said I was the adopter. That was one of my first lessons that, especially in volunteer work, admitting that you might be interested is tantamount to a formal application.”

On the other hand, David and CC White had the opposite experience, having to prove themselves worthy of trail work. Planning to move from Maine to Vermont, they wrote: “We received a WODC newsletter in which the Trails Committee advertised for applicants for a 4-person paid crew to do ‘Light Trail Work’, which would augment the work of the regular volunteers in cleaning up the ice storm damage. We applied. Chris Conrod very politely wrote us and said something to the effect that they were hoping for younger helpers, but that if we wanted to do a ‘trial day’, we could come to the first Trail Day of the year in May and work with other volunteers. They would choose a crew from all the applicants after that day. Well, we figured this Trails Committee must be a group of twenty-somethings, and seeing as how CC was 55 and David was 50, we were probably not in the running for the jobs. But we thought we might meet some nice people, and maybe they would at least let us do

some volunteer work, so we signed up. The long anticipated day finally arrived, and we met at the Bennett Street trailhead where David and I were assigned to work with several members of the Trails Committee so they could oversee us old folks and make sure we didn't cut off a foot or have a heart attack.

“That was one long and brutal workday, I'll say that. And, as it turned out, there weren't all that many applicants: just David and me, plus an 18- and a 20-year-old. The T.C. promptly hired the two young ‘whipper-snappers’, but eventually, desperate for warm bodies and figuring we could at least pick up a few sticks along the trail, added us two old farts to complete the crew. The rest of the summer is another story but, suffice it to say that the two of us, in spite of our advanced ages, made it through that summer as members of the ‘Light Work Trail Crew’. The added bonus was that we met and became friends with many terrific people in WODC, came to realize what a wonderful community WODC is, and said, ‘To hell with Vermont, let's move to Sandwich and become part of this!’ And here we still are, a little less active, and even older, but current (and proud) members of WODC, and adopters of the Walden Trail.”



**CC & David -- old but tough as nails.** Photo by Susan Lirakis

David and CC may be our oldest current adopters, although Chele Miller (Cabin Trail Adopter) remembers co-adopting with Ralph Weymouth, and having a great time, chatting and working together, when Ralph was a sprightly 90. (He's 95 now and has slowed down somewhat.) Then there's George Hurley, who's in his mid-70s, and a well known and highly regarded “Trail Poacher”; someone who doesn't actually have a trail of his own but sneaks out to work on other people's trails. In George's case, since he's handy with axes, this often means getting rid of monster blowdowns that the real adopters either couldn't cope with or put off working on, only to find that TP George had snuck out and done it for them.

*“Every member familiar with the purposes for which the axe was invented should be delighted to get the opportunity to work on Club trails.” (Warren Hart, 1909)*



**George Hurley will do anything to get to a big blowdown.**  
 Photo by Anne Skidmore in Don McGrath's "50 Athletes Over 50".

I originally envisioned TAs as being somewhere between Paul Bunyan and John Henry in stature, able to wrestle bears to a standstill and move boulders single-handed, and the first TA I interviewed, Paul King, did little to disillusion me. Paul, who's the adopter for the three high trails on Passaconaway (and on record as not wanting any partner, since a) he doesn't need one and b) few partners could keep up with him), is pretty much capable of handling anything that the trail can throw at him. He does upper Walden, the East Loop, and upper Dicey's (from Rollins on up, he thinks, but he's not sure), but it really doesn't matter if his coordinates are a bit hazy (he's actually a surveyor in the little time he can spare from hiking and skiing) since his attitude is that he'll do what he can anywhere, if he sees a problem. Since he hikes five times a week in fall, he sees a fair number of problems, which is probably why the rest of us don't. (After the recent hurricane, he simply went out three times a week until everything was cleared.)



**Paul King off Trail** photo by Sheldon Perry, on Mt. Liberty

But you can be a good TA even if you're small and blessed with only moderate upper body strength. Chele sees her job as walking her trail, figuring out what it needs, doing what she can, and calling the big guys for help with what she can't.

*"Libby developed a unique trail crew by recruiting the very young: boys and girls aged ten to fourteen. 'I know for a fact that my kids can do a better job than any paid trail crew,' said Libby, 'because the kids, especially the little girls, are so fussy.'"*

As for who to call on (and almost everyone needs help *sometimes*), Chris Conrod emails that although "there have been a whole slew of dedicated diehards over the years, right now I'd guess Fred Lavigne must hold the title of most tried, true and honorable beast of burden. I don't think he's much over 50. WODC should be able to get another 30 years out of him." Judging by Ralph's record, I'd say more like 40. And actually, Fred holds the official title of "Trail Overseer". Plus being somewhere between a third and a half of WODC's Trail Committee.



**Judy uses a bow saw to deal with a blowdown on Kelley.**  
 Photo by Peter Smart.

One question that I had for everyone was what tools they used, especially for cutting big blowdowns. When the tree is not in wilderness, chain saws are clearly the tool of choice (unless George sneaks in there with his axe). For trails in wilderness, you need hand tools. David and CC use either a 2-person cross-cut saw (well. . . duh . . . they *are* two people) or an axe, while Paul (one person) surprised me by using only three tools: an axe, a brush axe for limbs, and a 3" diameter, 12 foot long beech tree. He uses his axe to cut the blowdown, and then uses it again to cut himself a beech tree of the proper size to use as a lever to move the cut parts. And, the low horizontal tree limbs must be cut if you follow Paul's criterion for a clear trail: one that a person with a full

pack can hike without getting wet from overhangs. He doesn't use a saw because it can get pinched in the blowdown. Larry Labrie, another die-hard hiker/trail adopter, who has the part of Dicey's that Paul doesn't, uses an axe or a bow saw. Judy Reardon who, with her husband, Peter Smart, has years of tough trailwork on her resume, was a full informant. She wrote: "It is best to have a large array of tools on a trailwork trip, though less may be needed for a certain project. If you are brushing, you only need a lopper, and a saw for saplings and blowdowns, and maybe a hand-pruner or a sickle for hobblebush. (And some people like a machete or brush-axe) For sawing anything big, you need a wedge and a spare saw in case one saw gets pinched in the cut. A cross-cut (2-person) saw is best for trees bigger than 6 or 7 inches."



*Chele clears a water bar on the Cabin.* Photo by Helen Steele.

The blowdowns may be the most dramatic thing that TAs deal with, but the nitty gritty of most trails is cleaning out waterbars. You can count on them clogging up with autumn leaves, mud, debris, etc. and most trails have a daunting number of the damn things (Larry tells me that Dicey's Mill has more than 200), which are cleaned out either with hazel hoes or fire rakes (which Jack describes as "a cross between a rake and a hoe but not as good as either in my humble opinion").

*"With the new levels of hiking traffic after 1965, the problem of trail erosion escalated to heights -- depths, rather -- for which earlier methods and tools had never been designed. Knowing how to put in an effective and long-lasting water bar became the mark of a good trail worker. Constant attention to keeping water bars free of silt and leaves became the mark of a careful trail maintainer."*

Everyone has their own opinion on this but again, Judy spoke for all, writing, "For waterbar projects (cleaning them or creating them), you need more tools that are awkward to carry. (You'll probably still bring loppers and a saw to deal with roots and trees or branches that are in the way.) A grape hoe is great because it has a wide blade, though a mattock is stronger when you have roots & rocks to dig through. Shovels are useful, but you have to decide on long handles vs. short handles and pointed blade vs. square-ended. Fire rakes are an efficient way to clean out waterbars because they dig in and move material at the same time, but they don't handle big roots and big rocks, and they're hard to carry because they can cut your leg or your partner's!"

*"The department of improvements is always embarrassed by the difficulty of procuring faithful workmen to do forest or mountain work, and some of the paths have been neglected during the year for this reason." (Appalachia, 1883)*

**Dear Reader, if you're excusing yourself from trail work on the grounds that you don't have the necessary tools, that stationary little trailer behind the Ferncroft kiosk holds everything you need, and I bet Jack can be persuaded to tell you how to get at them.**



*Chris Conrod, who's as shy and reclusive as a Woodland Jumping Mouse, insisted on this photo from 1981, when he claims his legs were at their best. (And his beard.)*

Who the heck knows who took this photo. It was last century!.

**Tales from the Trail Adopters, Part II** will appear in the fall, continuing the saga of our unseen workers (some of whom are so modest that we had to steal photos off the Web to capture them); their joys and pains. The famous Fred Lavigne will be captured (along with Ev), and we'll even try to get a more recent photo of Chris. **Note:** photos can be viewed in color on the WODC website. And **Note:** all quotes in this article are taken from "Forest and Crag" by Laura & Guy Waterman, containing all that you'd want to know about trails -- and then some. S.G.

**TRAILS REPORT & OUTREACH**

Wonalancet experienced a mild winter this year; the small amount of snow we received has already started melting. There will still be remnants of Hurricane Irene damage left when the snow disappears, mostly in the form of blowdowns. The southern side of the Sandwich Range was spared the heavier downpours that fell further North. Nevertheless, there will be plenty of Annual Trail Maintenance that we'll need to perform this year.

We'll host 4 Volunteer Trailwork Days this season. We'll meet at the Ferncroft Parking Lot at 8:30AM on all our Trailwork Saturdays. The dates are: **Spring Trails Day, May 19; National Trails Day, June 2; New Hampshire Trails Day, July 21; and National Public Lands Day, September 29.** (Mark your calendars now!) Bring water, food, gloves, and clothing appropriate for the weather. Most of all, be prepared to spend a day outdoors deriving satisfaction from a job well done.

We'll be taking a break from fielding a professional trail crew this year. The work that Jed Talbot and his Off The Beaten Path trail crew have performed on the Blueberry Ledge Trail during the last 3 trail seasons has been spectacular. We are taking a break this season to ease the burden on our volunteer base who support the trail crew. Funding sources are also more difficult to find.

We will have a Volunteer Project similar to the successful 0.5 mile relocation that WODC volunteers performed in the 2011 season. We'll be building approximately 0.5 miles of trail to connect the McCrillis Path to a new section of trail on private land that leads to Whiteface Intervale. Once the snow melts we'll finalize the route of the new trail section. We'll wait until after Black fly season to start work on this Volunteer Project. If you want more information on any of our trail projects contact Jack 323-8913, jackw@g4com.com or Fred 284-6919.

WODC members responded to our call last season to perform more Wilderness Monitoring stints in the Sandwich Range Wilderness. Maintaining that wilderness environment and spiritual refuge requires dedication and effort on our part. Thanks to Beth Zimmer, Brian Gagnon, Evelyn MacKinnon, and Jennifer Wiley for pitching in last year. We'll need volunteers again this season to spend a day monitoring the Wilderness for the values we all hold so dearly. If you'd like to help contact Jack at 323-8913, jackw@g4com.com

**WODC Annual Meeting: Sunday August 18 at 6:30PM in the Chapel. Potluck in the Grove at 5:00PM.**

## WODC ORDER FORM

PLEASE MAIL COMPLETED ORDER FORM TO:

**WODC MEMBER SERVICES  
HCR 64. BOX 248  
WONALANCET, NH 03897**

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QTY	DESCRIPTION	PRICE	TOTAL
	1901 Guide to Wonalancet (Reprint)	\$10.00	
	WODC Map & Guide (3rd edition) Members	6.00	
	Non-Members	8.00	
	Unfolded WODC Map & Guide	9.00	
	3 or more unfolded Maps - each	7.00	
	WODC Historical Collection (CD)	25.00	
	WODC Patch	3.00	
	Coolmax T-shirt <input type="checkbox"/> Medium <input type="checkbox"/> gray <input type="checkbox"/> Large <input type="checkbox"/> blue <input type="checkbox"/> X-Large	18.00	
	New Memberships <input type="checkbox"/> Pathfinder (not for renewals!) <input type="checkbox"/> Steward <input type="checkbox"/> Trail Blazer <input type="checkbox"/> Five Year	15.00 25.00 50.00 250.00	
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**Editor's Ramble** . . . Years ago, when I was in grad school, my roommate introduced me to a law student named Christopher Stone. Chris was a nice guy, but the real reason we hung out with him was that the Law School Dining Room served steak once a week, and you could only partake if someone in the L.S. invited you. So we regarded Chris largely as a source of high quality protein. No one, including Chris, realized that some years hence, he would win fame (and notoriety) as the author of a paper entitled, *Should Trees Have Standing?*. Published in the Southern California Law Review, and timed to influence a Supreme Court decision on the Sierra Club's suit against the U.S. Forest Service (which had granted Walt Disney Enterprises the right to "develop" the Mineral King Valley wilderness). Chris' hastily (but extremely well) written paper became, and continues to be, a seminal legal document for the environmental movement. The earlier decision against the Sierra Club was not because the lower court believed that developing a wilderness area was a good idea, but because the development would not harm the Club, and therefore the Club lacked "standing" to bring suit. Chris' position was that if U.S. courts could confer jural personhood on corporations, giving them legal standing, it could confer the same personhood on trees, rivers, wilderness areas, etc. This would allow Mineral King Valley, as the adversely affected plaintiff, to bring suit in its own right, with the Sierra Club as attorney or guardian. The Supreme Court upheld the lower court decision, but Justice Douglas (an ardent hiker), who wrote the Preface to the volume in which Chris' paper appeared (and thus had an early chance to read it), dissented, writing, "Contemporary public concern for protecting nature's ecological equilibrium should lead to the conferral of standing upon environmental objects for their own preservation. See *Should Trees Have Standing?*" This reference alerted the media and, as Chris has since written, "there was something, if not prophetic, at least amiably zany about a law professor who 'speaks for the trees' -- and gets a few justices to listen." The snowball had started to roll downhill. Historically, Chris pointed out, rights have undergone a consistent, if slow, extension. When the Founding Fathers spoke of "inalienable rights", those rights were not extended to Blacks, Indians, children or women. Slaves, being property, never had rights, although if they were maimed or killed, their owner had the right to sue for damages, and this is how the courts thought of natural objects. If a river was polluted, the abutting property owners could sue for financial damages to themselves -- not to the river. In short, Chris wrote, natural objects "have no standing in their own right; their unique damages do not count in determining outcome; and they are not beneficiaries of awards". The jural personhood of corporations has recently been pushed to the point where these entities are allowed to influence elections. Suppose our forests and waters could sue for the multiple damages they have sustained, and use those monies to gain political influence? What an intriguing outcome of the question Chris posed, forty years ago this month!

**Susan Goldhor**



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