

## Chain-saw Injuries Rare Among A.T. Workers

By Bob Proudman

When it comes to lost-time work injuries due to chain-saw use, the Appalachian Trail Conference (ATC) and the Trail-maintaining clubs have an enviable safety record over the last fifteen years—only two such injuries have been reported.

Because the Trail crosses many miles of national-forest lands between Georgia and central Virginia, the Conference's southern region has "set the pace" since the early 1990s in USDA Forest Service-required chain-saw safety training. Despite early grumbling by some volunteer maintainers, ATC and club leaders are now, for the most part, strong supporters of required certification and training.

The memorandum of understanding (MOU) now in force was signed in 1998 by the Forest Service, National Park Service, and ATC; it "requires" training and certification in the southern region and "encourages" training in the mid-Atlantic region and New England. Next March, that five-year agreement will lapse, and a new agreement will need to be negotiated to establish Trailwide standards for certification and training of all sawyers. Due to concerns about a potential for liability, given the "double standard" in the 1998 agreement, ATC's Recruitment, Development, and Training Committee (RDT) last fall recommended adoption of the Forest Service's safety standards Trailwide.

The new MOU will also require that crosscut sawyers be certified. Forest Service safety

staff members working to implement national safety standards realized that the gravity of the consequences of accidents with chain saws and crosscut saws (particularly for bucking jack-sawed timber and other complex blow-downs) requires training and certification.

Most Conference leaders have concluded that a uniform standard requiring certification of all sawyers Trailwide is probably necessary. The RDT committee also acknowledged

that it will take several years to implement the new standard. A shortage of qualified instructors and budgetary limitations will affect training, purchase of required personal protective equipment, and over-all implementation of the anticipated MOU. Practical considerations argue for implementation of those new standards over a period of several years. Many volunteer maintainers recognize that it will take time to implement this standard effectively, particularly when teaching personnel, equipment, and money are scarce.

The standard advocated by the Forest Service is based on Occupational Safety and Health Administration (OSHA) standards. As the law of the land, it cannot be ignored. That standard is encompassed in the Forest Service's *Health and Safety Code Handbook* (available at the Forest Service's directives Web site at [www.fs.fed.us/im/directives/dughtml/fieldsh6000.html](http://www.fs.fed.us/im/directives/dughtml/fieldsh6000.html) under "6700—Safety and Health Program").

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### *The Unkindest Cut*

*An ATC Field Rep Discovers the Value of Safety Gear*

By J.T. Horn

The saw just stopped—for no reason.

"That's weird," I thought. "It's been running perfectly all day. I sharpened it and gassed it up only twenty minutes ago." Then I looked down at my left knee.

It was the Monday after Thanksgiving, and I had scheduled a work trip up to West Hartford, Vermont, to clear the vista up on Howard Hill. It was being overtaken by a thick growth of sugar maples two to three inches in diameter. They were about fifteen to twenty feet tall and growing in a dense stand, with

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# From the Editor

Rockett and I have completed our first work assignment as camp hosts and workers in an RV park in Presidio, Texas. That's next door to the Big Bend National Park—a birders' paradise, a fantastic display of geologic action, and a place of immense silence. It's desert country and so different from anything we've ever hiked that it kept drawing us back for one more look and hike up a canyon. We added twenty new birds to our life list (including our first roadrunner) and even had the treat of seeing a bobcat, which a ranger said was rare. We didn't see a mountain lion, however, which was high on our "hope list."

We also had the opportunity to volunteer for work in the small local library for several days. They were doing a complete inventory in order to convert to a computer system that would give the librarian more time to do other projects. Some of our fellow campers had volunteered to tutor English as a second language in local schools and helped out by substitute teaching as well. Opportunities to volunteer can be found almost everywhere. They are a continuing source of both productive work and a way to generate that good feeling in yourself—just the same as working for the A.T. I don't think that will ever change. However, many things (I guess most) do change. Some are good—some might not be considered good by many.

In the fall issue of *The Register*, we ran an opinion piece by Steve Clark that raised the challenge of using volunteers more than we are trending to do in our work on the A.T. This is especially obvious in the growing use of Trail crews to do the work maintaining-club members used to do on our footpath. Surprisingly, we didn't receive too much response to that article, but on page 3 is a letter from Thurston Griggs—an authority as qualified as Steve Clark. Both of these very able gentlemen are looking at the long term—which is essential if we are to continue to provide the special hiking opportunity the A.T. offers. A major focus at the 2002 A.T. club presidents' retreat in June will be looking at the long term—not a five-year plan, but twenty to thirty years into the future.

Taking the time to exercise our minds, glean ideas, and plan for a time when we may no longer be around to implement those plans is something that many of us just don't do. Yet, unless volunteer leaders participate in developing such a long-term outlook, I believe volunteerism for the A.T. will suffer. We must participate and plan for the future work of yet-to-be volunteers. This work is critical if volunteers are to have an impact on what the changes are to be. And, there will be changes!

Which brings me to my closing thought: Volunteer *leaders* are a rare item—and more sorely needed now than ever before. Most of us just don't want to accept the responsibility of all the planning, telephoning, writing, cajoling, and supervising that goes with being a leader. Yet, accepting such a role is one of the most satisfying (and selfish) reasons for volunteering—you can take credit for implementing a real change! My experience tells me that this is what our present volunteer and professional leaders need to expend more of their energies on—finding and developing capable leaders. I think we're all too aware that too few do too much. What is needed is to break down tasks and goals into bite-sized pieces and have more people do the work—we don't want to continue to burn out good people by constantly asking them to do more.

*John Morgan is editor of The Register. He can be reached by e-mail at john.morgan9@worldnet.att.net.*

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[NOTE: The outline of the masthead box above is the size of the official A.T. blaze, 2" x 6", for your reference.]

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**Seeking new horizons?** Find them as a volunteer with the Appalachian Trail seasonal Trail-crew program. Join our 2002 crews, and lend your hands and hearts to mending the famous footpath or building new routes. No experience required. Professional crew leaders instruct participants in state-of-the-art trail-building techniques. Five different crews operate along the A.T. during the summer and fall months and are sponsored jointly by A.T. maintaining clubs, agency partners, and ATC. To learn more about the crew program and to request an application, send a postcard with your name and address to: ATC Crew Program, TR-02, P.O. Box 10, Newport, VA 24128; call 540-544-7388; e-mail <crews@appalachiantrail.org>; or visit <www.appalachiantrail.org/protect/stewardship/crews.html>.

**2002 VOLUNTEER TRAIL CREW SCHEDULES**

May 16–August 19

**Southern (Konnarock) Crew**

June 8–August 14

**Maine Trail Crew**

July 15–September 20

**Long Trail Patrol (Vermont)**

August 29–October 21

**Mid-Atlantic Crew**

September 6–October 27

**Rocky Top Crew**

(Great Smoky Mountains National Park)



# The Limits of Volunteerism

By Thurston Griggs

*To the Editor:*

It was a great pleasure to see Steve Clark's opinion featured in the fall issue, because not only did he bring up a significant and long-term issue—the role of volunteers in our A.T. tradition—but he handled its complications both adroitly and with full benefit of his own considerable expertise. On the whole, I endorse his observations.

I would like to add a couple of points, however, if I might.

Enthusiasm and dedication characterize the value of volunteers. Regularity and proficiency, however, as Steve mentions, may be wanting—as workers sometimes become loath to acknowledge burn-out, or as their pride might impede taking on new habits or skills. Volunteers do things the way they like to see them done—not always in conformity with mandates, recommendations, or guidelines. That means new requirements or tasks might not be done according to desired specifications. Volunteers like to build spheres of responsibility that are of their own making. (Some of them even go “off line,” carried away by their own eagerness, and it's hard to “fire” them.) Some deadlines will not be met. Nobody knows that better than ATC's regional reps.

From that standpoint, volunteers *per se*—just because they are eager and willing to work without pay—perhaps do not always represent what the A.T. has become: a national public treasure. Once upon a time, the A.T. was “their baby.” Ironically, now it has become something different.

This leads to the next point. Operation of a popular recreational trail, one that is really an international attraction as well, on National Park Service and other public lands, involves many requirements and problems where schedules must be maintained, regardless of personal convenience, and where responsibilities to the public must be pursued for safety and security, not to mention convenience of users.

Volunteers, moreover, do not and

cannot act with the same official sanction and authority that professionals have. More and more, the Trail has changed into a public facility—instead of just being the recreational outlet for dedicated *aficionados*.

When a need to involve the federal government was recognized in order to save the A.T. back in the 1960s, one wing of the Trail's supporters resisted “federalization” along conventional lines. The compromise of arranging for a cooperative relationship with Trail volunteers *via* ATC and its constituent clubs was worked out—mainly through the originality and persistence of Dave Richie of NPS, who was made an honorary ATC member for this and other contributions.

Since that time, NPS has subsidized the “professionalization” observable in ATC. The Conference, in its turn, has subsidized activities of volunteers in the field as they work within their Trail clubs. Increasingly, federal or national objectives and requirements have been added—such as boundary monitoring, outreach to minorities, ridgerunning, caretaking, and even some aspects of land management. Those are functions now being performed cooperatively, often at the behest of the Park Service. Steve has recognized this trend, of course, but I am not certain that the nationalized scenic trail can use volunteers to the same extent, or in the same way, as when they could regard the Trail as being “theirs.” This changed status of the A.T. is because of the kind of popularization that has been necessary in order to preserve the Trail.

Ironically, that popularization has been enormously assisted by the Trail community's need to promote the Trail in order to finance ATC's management and retention of it and even in order to further those efforts that were made to get the federal government to save and protect the Trail in perpetuity.

To preserve the national heritage of the Trail is a basic objective. So, we must expect that volunteers will increasingly

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# Volunteer Hours on the A.T.

The thirty-one A.T.-maintaining clubs, volunteer crews, ATC headquarters and Bears Den volunteers, and the Conference's Board of Managers reported a total of 186,475 volunteer hours for the Appalachian Trail during the 2001 federal fiscal year completed September 30, 2001. Those hours include time spent in meetings, the primary purpose of which is Trail management, and travel to and from work trips. The total is about seven percent lower than last year's record of

more than 200,000 hours. The good news appears to be that the clubs are "spreading the load": 5,356 volunteers reported work hours in fiscal 2001, a 16-percent increase over the 4,601 workers who reported work time in fiscal year 2000.

**Total of VIP/VIF Workers: 5,431**

**Total of workers minus duplicates: 5,356**

**Total of volunteer hours reported: 186,475**

	VOLUNTEERS IN PARKS (VIP)	VIP HOURS	VOLUNTEERS IN FORESTS (VIF)	VIF HOURS	WORKED BOTH VIP AND VIF (DUPLICATES)	TRAVEL/ MEETING HOURS	TOTAL HOURS
<i>Maine A.T. Club (includes Trail Crew figures)</i>	635	20,971					20,971
Appalachian Mountain Club	36	1,210	49	2,879	2	868	4,957
<i>Dartmouth Outing Club (estimate)</i>			160	2,900			2,900
Green Mountain Club	38	227	308	2,133	6	638	2,998
AMC-Berkshire Chapter	185	5,968				356	6,324
AMC-Connecticut Chapter	134	2,278				1,759	4,037
NY-NJ Trail Conference	363	6,230					6,230
Wilmington Trail Club	33	262				261	523
Batona Hiking Club	25	288					288
AMC-Delaware Valley Chapter	53	623					623
Philadelphia Trail Club	42	561				411	972
Blue Mtn. Eagle Climbing Club	57	5,259				610	5,869
Allentown Hiking Club	34	1,500					1,500
Brandywine Valley Outing Club	2	12					12
Susquehanna A.T. Club	44	593				495	1,088
York Hiking Club	16	451				473	924
<i>Biennial Conference (not reported to home clubs)</i>	40					3,393	3,393
Cumberland Valley A.T. Club	28	976				422	1,398
Mountain Club of Maryland	43	1,085				743	1,828
Potomac A.T. Club	714	12,261					12,261
Old Dominion A.T. Club	51	1,286	9	264	7		1,550
Tidewater A.T. Club	17	145	119	1,658	6	1,334	3,137
Natural Bridge A.T. Club			109	5,245		1,055	6,300
Roanoke A.T. Club	60	850	140	3,750	22	1,000	5,600
Outdoor Club at Virginia Tech			42	1,549			1,549
Piedmont A.T. Hikers			136	7,696		3,365	11,061
Mt. Rogers A.T. Club	19	170	48	1,987	19	1,820	3,977
Tennessee Eastman Hiking Club			469	7,140		2,923	10,063
Carolina Mountain Club			109	5,047		129	5,176
Smoky Mountains Hiking Club	252	11,936	68	2,076	13		14,012
Nantahala Hiking Club			58	3,059			3,059
Georgia A.T. Club			265	13,187		604	13,791
Konnarock Crew			129	6,731		2,247	8,978
Mid-Atlantic Crew	35	2,165				558	2,723
Rocky Top Crew	53	2,625				643	3,268
Long Trail Patrol			49	3,384			3,384
<i>Maine Trail Crew (included in MATC figures)</i>	48	3,963				591	4,554
<i>ATC Board/Committees (includes estimates)</i>	35	3,703					3,703
ATC Headquarter volunteers	90	4,691					4,691
Bears Den Volunteers	30	1,357					1,357
<b>Totals</b>	<b>3,164</b>	<b>89,683</b>	<b>2,267</b>	<b>70,685</b>	<b>75</b>	<b>26,107</b>	<b>186,475</b>

# Developing a Resource Management Plan for the Appalachian Trail

By Don Owen and Pete Irvine

The landscape of the Appalachian Trail has an extraordinarily diverse array of natural resources and a rich cultural history. Managing those important resources represents a significant challenge for Trail management partners. The Appalachian Trail Park Office (ATPO), in cooperation with ATC, agency partners, and the Trail clubs, is developing a resource-management plan (RMP) to identify specific resource-management programs and activities and set priorities for allocating available funds and staff.

In National Park Service (NPS) parlance, the plan is a procedure for preserving and managing a park's natural and cultural resources. It provides an analysis of a park's current situation and serves as a tool for integrating responsibilities to achieve resource-preservation and -management objectives. While the Appalachian Trail is officially a unit of the national park system, it certainly is not a traditional "park." Of the roughly 270,000 acres of public land associated with the A.T., less than half is administered directly by NPS, but its domain includes approximately 90,000 acres acquired and administered by NPS specifically for the A.T. The remainder, some 180,000 acres, is administered by the USDA Forest Service and state agencies. Developing an RMP cooperatively for all A.T. lands will accomplish two things: (1) It will allow NPS to compete for funding, and (2) it will identify the important natural and cultural resource issues along the Trail and set priorities for addressing the most pressing needs and concerns for managing those resources.

The cooperative management partners (land-managing agencies, ATC, Trail clubs, and state natural-heritage offices) have worked together for many years to complete inventories of threatened, endangered, and sensitive plant and animal species along the Trail. A similar process of identifying cultural resources on Trail lands on a state-by-state basis is now underway.

A.T. Park Manager Pamela Underhill views the emphasis on natural- and cultural-resource management as part of the next "evolutionary stage" of the A.T. project. "With the majority of the federal A.T. land-acquisition effort completed, and the essential work of managing and maintaining the Trail for recreational use ongoing," said Underhill, "it is important that we increase the focus on identifying, protecting, and managing the resources of these lands."

Two "scoping" meetings have been held so far. In those meetings, participants from several government agencies, ATC and clubs have identified primary resource issues and concerns. ATPO staffers are identifying sources for several resource "data sets" that will be included in the RMP. Preliminary writing will begin soon to summarize the resource values of the A.T. and describe the current resource-management program. The "historic context" of the Trail is being researched and documented by an NPS archeologist,



*The site of Daniel Shays' "last stand" in 1787 in a rebellion against taxes levied by the Continental Congress, on A.T. lands near South Egremont, Massachusetts.*

consulting a variety of A.T. sources. In keeping with ATC's policy to assist agency partners in identifying and protecting significant natural and cultural resources associated with the Trail, and in keeping with the cooperative NPS-ATC agreement, the ATC Trail and Land Management Committee is serving as a *de facto* oversight committee for development of the plan. ATPO has sent a letter to Trail clubs and agency partners describing the RMP development process and inquiring about their interest in participating in that process. The primary focus of the plan will be on the natural and cultural resources located on the A.T. lands acquired by NPS for the Trail and administered directly by the A.T. Park Office. However, the ultimate goal is to recognize those resources on all A.T. lands and work cooperatively with other land-managing agencies and individuals to protect important resource elements.

Participation in developing the RMP is open to everyone in the A.T. community. If you are interested in participating, or in being kept informed, please contact ATPO at (304) 535-6278. If you have specific input on cultural-resource issues, please contact Don Owen at (304) 535-4003; on natural-resource issues, Kent Schwarzkopf, (304) 535-6767. A draft plan is expected to be developed by the fall of 2002.

*Don Owen is the National Park Service Appalachian Trail Park Office's environmental-protection specialist. Pete Irvine is the U.S. Forest Service Appalachian Trail coordinator and also works out of NPS-ATPO in Harpers Ferry.*



## Keeping Out the Huns and Vandals

As a young ranger at Cape Hatteras, I spent many hours installing snow or sand fencing along places on the dunes where irresponsible drivers played with their four-wheel-drive vehicles. It will not surprise many Trail managers to learn that, twenty-five years later, such vehicles continue to be an issue for me. And you.

Since the federal land-acquisition program was begun in the late 1970s, almost 110,000 acres of land or interests in land have been acquired for the Appalachian National Scenic Trail. The National Park Service acquisition alone adds up to more than 1,200 miles of boundary, and that does not count Forest Service and state holdings. Just for comparison, Yellowstone National Park encompasses more than two million acres, but its perimeter boundary is less than 300 miles.

As you may know, the legislation that established the A.T. as a national scenic trail provided that it be "primarily a footpath." Federal regulations prohibit motorized use of the Trail, as do most state regulations, except in very limited circumstances, such as response to emergencies. Too often, however, the corridor that was acquired for foot travel is used as a motorized recreationist's playground.

The corridor for the Trail is typically narrow, about 1,000 feet in width. It lies next to housing developments and innumerable small lots. Nearby wooded public land is too much of a temptation for some all-terrain-vehicle (ATV) owners. As ATV sales and use continue to soar, what's a dedicated maintainer to do?

Let's share some success stories and lessons learned. Getting a handle on illegal motorized use includes applying techniques from three related areas: educating, closing, and enforcing.

*Educating*—Chris Florack, who manages ATC's corridor boundary program, hikes several hundred miles of boundary annually. He has seen it all, from sheds to swing sets to timber cuts in the corridor. Florack tells me that, when clubs post the boundaries of their sections on a regular basis, it really makes a difference. Posting the boundary with ATC-supplied signs and occasionally refreshing the ax blazes with fresh paint are great preventive tools. They tell adjoining property owners and would-be violators that the area is looked after. Plus, a well-maintained boundary is vital for a court case. What I like best about active boundary-monitoring programs is that they get club members out on the ground with our neighbors. You might note a minor encroachment or beginnings of an ATV trail across the corridor. If you are comfortable with doing so, it is often productive and good relationship-building to speak to the neighbor and make diplomatic inquiries about what you have observed.

*Closing*—On a per-mile basis, the most interface with corridor neighbors probably occurs in ATC's mid-Atlantic region. Regional Representative Karen Lutz and Trail managers have a busy gate- and boulder-closure program. Successful closures have been accomplished at several sites, such as Big Flat in Pennsylvania and a huge powerline crossing just south of Harpers Ferry. (I also want to brag on a lot of work recently done by the A.T. Committee of the Appalachian Mountain Club-Berkshire Chapter in Sheffield, Massachusetts.) Such closures are often big-ticket investments in gates and boulders and fencing that are funded by ATC.

Lessons learned include using adequately sized boulders—at least two to three tons, according to Lutz. "Iceberging," or partially burying the boulders at the time of installation, is very important. The ATC Land Trust was even successful in getting a quarry to donate the boulders used at a major power-line crossing abused by ATVs. That project required participation by several players, including NPS maintenance workers and two utility companies [see Winter 2000/01

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### Trail Maintenance Quiz

*The answers to the questions presented here represent the generally accepted practices as outlined in ATC's other publications, particularly Appalachian Trail Design, Construction, and Maintenance. If you disagree with any of the answers offered, or have additional advice to add on one of these topics, or even ideas for future questions, please let me know.*

—J. T. Horn, New England Regional Representative

1. *When using an ax to limb a tree, you should:*
  - a. Stand on the same side of the trunk as the limb.
  - b. Straddle the trunk.
  - c. Stand on the opposite side of the trunk from the limb.
2. *When you and your partner are standing ten yards apart and using a clinometer to measure the slope in between, you should sight on:*
  - a. The ground at your partner's feet.
  - b. The highest point visible in between you and your partner.
  - c. The lowest point visible in between you and your partner.
  - d. The eye-level of your partner, assuming that you are approximately the same height.
3. *To sharpen pruning (or lopping) shears, a trail maintainer should:*
  - a. Sharpen both sides of the cutting blade.
  - b. Sharpen only one side of the cutting blade.
  - c. Depends on the design of the shears.
4. *When selecting a replacement wooden handle for an ax, pay attention to the grain of the wood. The grain should run:*
  - a. Parallel to the wedge slot.
  - b. Perpendicular to the wedge slot.
  - c. Depends on whether it is a single-bit or double-bit ax.

*Answers are on page 11.*

# A.T. User Survey: *Minimum Impact Practices and LNT Knowledge*

By Pete Irvine

The Appalachian Trail Park Office (ATPO) of the National Park Service has released the results of a comprehensive visitor-use survey conducted on the Appalachian Trail during the summer and fall of 1999. This article is the second in a series profiling some results of the survey.

Three of the fifty-five multipart questions in the survey dealt with minimum-impact practices and knowledge of Leave No Trace outdoor ethics. Respondents were asked to rate their own knowledge in one of five categories (never heard of it, novice, intermediate, advanced, expert). Ninety percent of the respondents rated themselves at least intermediate in knowledge. Sixty-one percent of all respondents, including eighty-eight percent of the thru-hiker respondents, rated themselves as either advanced or expert.

Respondents were asked to answer true or false to ten questions to test their minimum-impact/Leave No Trace knowledge.

Respondents also were asked to select the proper distance from a stream to dispose of human waste. Both ATC and LNT recommend a minimum distance of 200 feet. Unfortunately, one-third of respondents chose 100 feet or less, and another 40 percent chose 101 to 200 feet as appropriate.

Finally, respondents were asked the proper distance away from an established trail to camp. ATC encourages camping out of sight of the Trail, without a set distance recommendation. LNT recommends a minimum of 200 feet in the Northeast, with no set distance in the Southeast. One-third of the respondents chose 50 feet or less, and 60 percent chose 100 feet or less.

Based on the range of responses to the specific questions, it appears that respondents' actual knowledge of Leave No Trace practices does not match their self-assessments.

The A.T. user survey was a cooperative effort involving Trail club volun-

QUESTION	CORRECT RESPONSE	CORRECT NONTHRU-HIKERS*	CORRECT THRU-HIKERS
When selecting a campsite in obviously impacted areas, you should spread activities to places that have not been disturbed.	False	90%	89%
The same rules and regulations apply to the entire Appalachian Trail.	False	71%	87%
When hiking and encountering a horse party, you should wait until the horses have come to a stop and then move quickly past them. (Horses are allowed by law on some portions of the A.T. within the Great Smoky Mountains National Park)	False	72%	74%
I cannot ride my mountain bike on the A.T. because it is not allowed.	True	88%	97%
While backpacking, you should never camp next to a stream.	True	69%	60%
If I wanted to ride my all-terrain vehicle (ATV) on the A.T., I could do so as long as I stay on the Trail.	False	99%	99%
When hiking in remote, lightly used locations, it is best to camp on a site with no evidence of previous use, to minimize your impact the wilderness environment.	True	44%	73%
Building temporary fire rings by moving rocks and logs at your campsite is an accepted low-impact behavior.	False	82%	92%
When traveling on existing trails, it is best to walk single file and stay on the main path to minimize impact.	True	99%	99%
Hikers should not collect plants and rocks along the Appalachian Trail.	True	98%	97%

(\* Note: "NonThru-Hikers" includes day-users, overnight-users, and section-hikers.)

teers and club and Conference staff members, along with personnel from federal and state land-managing agencies, the ATPO, and other cooperators. Funding for the survey was provided by the National Park Service and the U.S. Forest Service Southern Region. A total of 1,879 A.T. visitors from Maine to Georgia voluntarily completed the sixteen-page questionnaire. Researchers from the University of Vermont and

Pennsylvania State University designed the survey and compiled and analyzed the responses. Results are compiled in a 479-page "sourcebook," available as two Adobe Acrobat files on the National Park Service Appalachian Trail Park Office Web site at [www.nps.gov/appa/pphtml/facts/html](http://www.nps.gov/appa/pphtml/facts/html).

Pete Irvine is the USDA Forest Service Appalachian Trail Coordinator.

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# Lyme Disease: Risks for Maintainers

By Susan Daniels

The Lyme-disease vaccine LymeRix was removed from the market by its manufacturer, GlaxoSmithKline, in February. A number of lawsuits have been filed against the manufacturer by people claiming to have been harmed by the vaccine, approved by the FDA in late 1998. After a year-long investigation, the FDA determined that there was insufficient evidence of harm from the vaccine to withdraw it. The manufacturer denies that the lawsuits influenced the decision to stop sales, citing a large decline in projected sales as the reason for taking the vaccine off the market.

## The Risk

The risk of contracting Lyme disease continues to rise, with more than 16,000 cases reported annually in the United States. Health officials believe that the disease is significantly underreported. The Appalachian Trail state with the highest incidence is New York—Dutchess County has the most reported cases in the country, about 1,300 per year. New Jersey, Connecticut, and Pennsylvania continue to have high rates of infection, with dramatic increases reported in Massachusetts and Maryland. Somewhat lower rates are found in the northern New England states and in Virginia, with fewer cases being reported in the more southern states.

## The Source

Deer ticks, also known as black-legged ticks, are the most common vector for the disease in the East, particularly during the nymph stage, when they are about the size of a freckle and easily overlooked. The blood-sucking parasites are commonly found in deciduous forests, where leaf litter provides them with shelter and moisture. They also inhabit areas with low brush or long grass. Ticks acquire the bacteria when they feed on small animals that are infected, and then transmit the disease to other animals.

## Prevention

- *Wear long pants and long-sleeved shirts;* tuck pants into socks. Crawling ticks are more visible on light-colored clothing. A tick may crawl on its host for several hours before beginning to feed, so check clothing frequently. After a work trip or hike (or on a daily basis if on an extended outing), inspect your entire body, and ask a companion to inspect areas that are difficult to see. Launder the clothes you were wearing.
- *Apply insect repellent* containing permethrin (an insecticide that kills ticks) to pants, socks, and shoes (but not to skin), following manufacturer's directions. Repellents containing DEET may be used on skin, but should be applied sparingly according to EPA guidelines to avoid toxicity.
- *Stay on trails;* avoid bushwhacking. Walk in the center of the trail, avoiding contact with brush and grass along the sides. Do not sit directly on the ground.
- *Remove an embedded tick* by using tweezers to grasp it as close to the skin as possible—remove it using a steady pull. Apply an antiseptic to the area after the tick has been

removed. Do not use a hot match, petroleum jelly, oil, or any other substance on the tick. Transmission of the bacteria from an infected tick to a host may take 48 hours or more—removing an embedded tick as quickly as possible may decrease the likelihood of infection.

## The Symptoms

- *A bulls-eye rash* that may start as a red spot at the site of the tick bite and then expand over several days or weeks is the most identifiable early symptom. The rash generally appears within seven to fourteen days of the tick bite but may be seen after as few as three, or as many as thirty, days of incubation. About a quarter of those infected never exhibit the rash, however.
- *Fever, headache, body aches, and fatigue.*
- *Pain and swelling in the joints, particularly the knees.*
- *Neurological symptoms,* such as severe headaches, temporary facial paralysis (Bell's palsy), numbness or weakness of the limbs, and poor coordination.
- *Heart problems* may develop within a few weeks of infection, causing dizziness, irregular heartbeat, or shortness of breath.

## Diagnosis and Treatment

According to the Centers for Disease Control (CDC), Lyme disease is rarely fatal, but it can be severe, chronic, and disabling. A person who develops any of the signs or symptoms listed above after being bitten by a tick, or *after being in tick habitat, even if unaware of a tick bite,* should seek medical attention immediately.

People who were vaccinated with LymeRix but who develop symptoms also should seek medical attention. According to the manufacturer, the vaccine (administered in three doses over the course of a year) is about 50 percent effective after two doses and about 80 percent effective after the three-dose series. It is not known how long the protection may last.

Clinical symptoms are sufficient to diagnose early-stage infections, according to the CDC. Tests are available, however both false positives and false negatives are common.

Treatment of early-stage, nondisseminated infection is by oral antibiotics. Oral or intravenous antibiotics may be used in cases where the disease is longstanding or disseminated. Treatment, however, is not standardized—some physicians prescribe antibiotics when a patient reports being bitten by a deer tick, even without symptoms; others diagnose based on symptoms alone; others want confirmation by testing. There is also disagreement regarding treatment of patients with chronic symptoms; some prominent experts recommend antibiotic treatment lasting months or even years, but others say that prolonged treatment is ineffective.

*Susan Daniels is Trail-management assistant at ATC headquarters and editorial assistant for The Register.*

# Natural Heritage Summary

By Kent Schwarzkopf

With the addition of New York and New Jersey studies, the natural-heritage inventories of the A.T. corridor in all fourteen Trail states were completed. A total of 2,052 occurrences of rare plant and animal species were found at 516 sites Trailwide.

The New York natural-heritage program and independent botanist Ted Elliman conducted a field survey in New York during 1999 and 2000 of rare, threatened, and endangered plants and animals within the state's 91-mile A.T. corridor. Those lands included all National Park Service Appalachian Trail Park Office land and other public land within 500 feet of the footpath.

Fourteen rare plant species, including Atlantic white cedar, blazing star, spotted pondweed, heath aster, and violet bush clover, were documented, along with seven types of rare or exemplary plant communities. Seven rare animal species, including the peregrine falcon, New England bluet (damselfly), northern cricket frog, and shortnose sturgeon, were found.

Elliman also conducted a field inventory of the 72-mile A.T. corridor in New Jersey during 2000. Animal species were not included in that inventory. Forty-one rare plant species were identified in the corridor, including red spruce, red pine, paper birch, round-leaved serviceberry, bunchberry, rosy twisted stalk, Andrews bottle gentian, and oak fern. Fourteen rare plant occurrences were newly documented, and nineteen others were confirmed. None of the species documented are globally rare or federally endangered, but many are endangered or threatened in New Jersey. The only known population of red pine in the state is found in the A.T. corridor. Seven types of rare or exemplary plant communities also were documented.

The written reports of those inventories also document threats (such as exotic plants, insect pests, and trampling) to each occurrence and offer management recommendations for their protection.

*Kent Schwarzkopf is a natural-resource specialist with the NPS-Appalachian Trail Park Office in Harpers Ferry.*

## A.T. Signs and Trailhead Information Boards

Providing effective information to users of the Appalachian Trail can inform and educate Trail users and the general public, improve safety, and influence behavior. Trail maintainers can play an important role in providing on-Trail information, using personal contacts, signs, and Trailhead information boards.

Effective on-Trail signs are well-conceived, well-constructed, well-placed, and well-maintained. Avoid "sign pollution"—too much can be worse than none, just as over-blazing can be worse than insufficient blazing.

Signs and Trailhead information boards should be consistent with the policies of the Trail-maintaining club (as detailed in the club's local management plan), ATC, and the land-managing agency partner. Good information is found in Chapter 11 of *Appalachian Trail Design, Construction, and Maintenance*, with an emphasis on making and installing routed wooden signage.

ATC has two other reference publications available. *Appalachian Trail Corridor Management Signs* (April 1996) is an eight-page catalogue of standard Trail-management signs available from ATC and guidelines for their use. Most are small, plastic, all-weather signs designed and approved for use on lands acquired by the National Park Service (NPS) for the A.T. Many are suitable for use on other lands as well, subject to club and agency-partner agreement. The catalogue shows many signs with two logos—the A.T.-diamond servicemark of ATC and

the NPS arrowhead. As new supplies of individual signs have been obtained by ATC, the NPS logo has been replaced by a second A.T. diamond, making most of the signs applicable on lands administered by other agencies. Signs are supplied free of charge to A.T.-maintaining club and agency partners, however supplies may be limited. Maintainers are encouraged to determine if the club has a supply of specific signs before contacting ATC.

*Planning and Building an Appalachian Trailhead Bulletin Board* (1999) is a stewardship publication of ATC, prepared and published with a grant from the National Park Service. This 16-page booklet includes a decision-making guide for determining when a Trailhead bulletin board (also called information board or kiosk) is appropriate and suggestions for the design, placement, and contents of the board. Design drawings and materials lists for three different information boards are included. One important consideration for information-board designers is that most users spend less than three minutes scanning Trailhead information boards, so brevity and clarity are important. A second consideration may arise from the needs of area businesses to inform hikers of their services, location, hours, etc. The club and landowning agency must approve and control this use and posting.

For copies of the sign catalogue or the Trailhead signboard booklet, or to place a sign order, contact Susan Daniels at ATC headquarters in Harpers Ferry.

*A.T. signpost on national forest land. Signs using international symbols, similar to those shown here, are available from ATC. (ATC file photo)*



## CHAIN-SAW INJURIES

*Continued from page 1*

It is sobering to read that document. In it, certain rules are bolded, which means someone has died as a result of a failure to comply with mandatory or recommended safety practices. Those fatalities—and there are far too many in the history of chain-saw use and forestry—make a point better than any verbal argument or ATC briefing paper: Safety counts. Indeed, that pattern has been largely broken due to aggressive safety management.

In July 2001, the Forest Service also published its "Chain Saw and Crosscut Saw Training Course," which is specifically designed for "project sawing,"

such as trail work, vista clearing, and campground maintenance. It essentially replaces the "S-212 Fire Fighting Course" that had been the previous standard for nonfirefighting saw users. The excellent new curriculum was prepared by a team of Forest Service experts from the Technology and Development Program at Missoula, Montana. The entire program ("7E72E41—Chain Saw and Crosscut Saw Training") includes a students' handbook, an instructors' handbook, certification documentation, and two PowerPoint presentations. They are all available on a special CD-ROM. ATC is exploring with the Forest Service whether this course can be made available on ATC's Web site. We will let you know regard-

ing its availability in the next issue of *The Register*.

If clubs and maintainers wish to express their opinion on this matter, please address your comments to Jim Hutchings, Chair, ATC Recruitment, Development, and Training Committee, in care of ATC (address on page 2). The committee will be meeting in May and again this fall to review this matter, among others on its agenda, and welcomes your input.

*Bob Proudman is ATC's director of Trail-management programs and has never cut himself with either chain saw or crosscut saw. He did need fifteen stitches for an ax injury once, however. Weirdly, certification for axmanship is not required.*

**Wilderness first aid classes for 2002** have been scheduled by the Wilderness Safety Council, a not-for-profit organization dedicated to training volunteers in outdoor leadership, safety, and wilderness medicine. Each 18-hour class includes classroom study and hands-on practice and results in a two-year certification. The cost is \$140. To register or obtain information, contact the Wilderness Safety Council at (703) 836-8905, online at <[www.wfa.net](http://www.wfa.net)>, or by e-mail to <[chris@wfa.net](mailto:chris@wfa.net)>. Classes being held in Trail states are listed below.

April 6–7	Alexandria, Va.
April 6–7	Raleigh, N.C.
April 13–14	Mountainside, N.J.
April 20–21	Charlotte, N.C.
April 27–28	Newark, Del.
May 4–5	Alexandria, Va.
May 4–5	Greensboro, N.C.
May 18–19	Richmond, Va.
May 25–26	Alexandria, Va.
June 1–2	Alexandria, Va.
June 8–9	Mount Holly, N.J.
June 15–16	Charlotte, N.C.
June 15–16	Harrisburg, Pa.
June 22–23	Mountainside, N.J.
June 29–30	Raleigh, N.C.
July 13–14	Alexandria, Va.

## KEEPING OUT THE HUNS

*Continued from page 6*

issue of *The Register* for an article on that project].

ATC also has drawings for a standard, metal-pipe gate that has proven to be a very good design. Contact Karen Lutz (see address/telephone number on page 2) for the plans.

*Enforcing*—I saved the hardest for last. With one ranger, the Appalachian Trail Park Office is limited in its ability to respond. I encourage you, however, to keep us and ATC informed of problems through corridor-monitor reports, the incident-report form, and messages to <[incidents@appalachiantrail.org](mailto:incidents@appalachiantrail.org)>.

Sometimes off-road problems reach the point where it's "ticket-writing time." We have, with the help of state and local enforcement agencies, staked

out problem areas. I encourage Trail managers to develop solid working relationships with the rangers and law-enforcers of parks and forests through which the Trail travels. It has been my experience that game-management agencies are some of the most responsive to off-road-vehicle issues. I would be very pleased to work with any clubs or individuals to foster the needed relationships with your state and federal partners.

*Ranger Gray can be reached by e-mail at the Appalachian Trail Park Office at <[robert\\_gray@nps.gov](mailto:robert_gray@nps.gov)>, by telephone at 304-535-6171, or by mail at NPS-ATPO, Harpers Ferry Center, Harpers Ferry, WV 25425. The "Silver Bulletin" appears periodically to address various Trail-management and -protection issues.*

## THE LIMITS OF VOLUNTEERISM

*continued from page 3*

have to work within constraints and pressures that require professional attention. Our concern must be that as much of the work as can be done adequately (efficiently enough) be done by volunteers. However, decisions suited for volunteers to handle will increasingly be made on a bureaucratic basis, rather than according to the freedom and discretion of unpaid volunteers.

*Thurston Griggs was the founding editor of The Register in 1978, served on ATC's Board of Managers, and was named an honorary member of ATC. He was a Maryland Department of Natural Resources ridgerunner on the A.T. for many years and currently is a coordinator for the Appalachian Trail Land Trust. He has served as president, trail supervisor, and archivist with the Mountain Club of Maryland and is a Potomac Appalachian Trail Club overseer.*

## THE UNKINDEST CUT

Continued from page 1

a stem about every foot and a half. If we are to have a view from the top of the hill in another ten years, I knew we had better do some clearing now.

I had a good night's sleep, woke up early, and ate a big breakfast, because I knew I would be cutting and hauling brush all day. We could drive most of the way to the work site. There were two of us, and we split up and went to work a few hundred feet from each other, to stay out of each other's way, but close enough to help if someone needed it. I'd been cutting and throwing brush for about three-and-a-half hours when it happened.

I was bent over, cutting a two-stemmed trunk at the base. The trees were so small I was not felling them in the traditional manner—cutting a notch and then a back cut. Rather, I was just cutting through them at the base and either pushing the stems out of my way or letting them fall where they wanted. That technique is much faster, but much less precise. It works well in the dense brush where I was cutting these skinny

trees. I don't know if I was tired, or working too fast, or just simply not paying attention, but I made a mistake.

As I cut through the two-stemmed tree, I began pushing one stem out of my way with my right shoulder and elbow—still with both hands on the saw. The chain was decelerating after the cut but had not stopped completely. The three-inch trunk fell on top of the saw and forced it down onto my leg about one inch below my kneecap.

For the first two seconds, I was just surprised when the engine suddenly stalled, and I honestly thought the chain saw was having mechanical problems. Then I saw the five-inch cut in my protective chain-saw chaps and the bright white core of the chaps poking out. I didn't really feel the saw grab the chaps. The nylon covering was cut open in a straight line about five inches across and about three strands of the white protective material had been broken. Those three strands had bound the saw and caused it to stall.

Everything in this accident worked perfectly—except the operator. I was

wearing full protective equipment—cut-resistant leather boots, four-ply Kevlar ballistic chaps, a helmet with ear and face protection, cut-resistant gloves, and safety glasses. The protective equipment operated the way it should. I was saved from serious injury.

While I don't think I would have had an amputation, I know that, without the chaps, I would have suffered a major gash. The saw hit in the soft spot right below my kneecap. I can only imagine how many ligaments and tendons would have been cut had I not been wearing my safety gear.

I might say I got lucky, but I don't really think of it that way. I'm an experienced sawyer, I've taken the A.T. chainsaw-safety course, and I've used a saw for about twelve years, the last seven as part of my job. I should have been working more carefully, but I also was well-prepared and had the right equipment. That seems to have made the difference.

*Epilogue: The chain-saw chaps have been retired, and the view from Howard Hill is much nicer.*

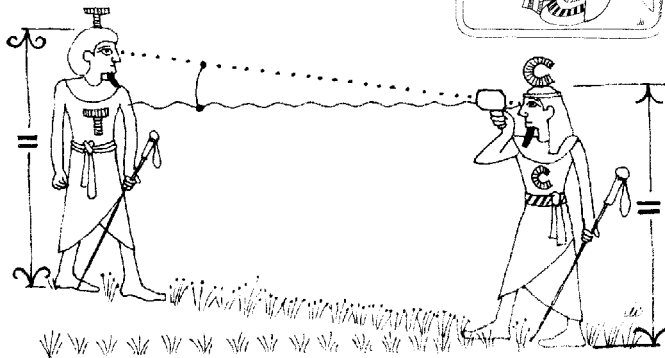
*J.T. Horn is ATC New England Regional Representative.*

## Answers to Trail Maintenance Quiz

(Questions are on page 6)

1. **c.** You should always try to stand on the opposite side of the trunk from the limb—putting the trunk between you and where your ax will strike. The trunk serves as a barrier and will help keep you safe if you have a glancing blow or an uncontrolled swing.

2. **d.** When using a clinometer, you should sight on the eye-height of your partner. If there is a height disparity between you, make adjustments in your sighting



target (*i.e.* shoulder sighting on a taller person). This is critical in getting an accurate measurement of slope. ATC recommends using the Süunto clinometer as the most robust and effective tool for measuring slopes for trail-design work.

3. **c.** On anvil-style shears, sharpen both sides of the cutting blade. On the hook-and-blade type, sharpen only the one beveled edge. Do not sharpen the hook of the flat side of the cutting blade, since it is the one-sided bevel that, by forcing the blades together as they close, ensures a clean cut.

4. **a.** The grain of ax handles should run parallel to the length of the handle and to the wedge slot. This minimizes the chances of having your handle break, split, or warp.



# ATC CALENDAR

May 4 ATC Information Center reopens for weekends and holidays

May 11–12 Board of Managers Meeting—National Conservation Training Center, Shepherdstown, W.Va.

May 15–19 Mid-Atlantic Ridgerunner Training, Carlisle, Pa.

May 27 ATC Offices Closed—Memorial Day Holiday

June 1 National Trails Day

June 21–23 Club Presidents' Retreat—National Conservation Training Center, Shepherdstown, W.Va.

July 1 Copy Deadline, Fall Issue of *The Register*

July 4 ATC Offices Closed—Independence Day Holiday

July 15 Deadline for Grants to Clubs and Grants for Outreach applications

September 2 ATC Offices Closed—Labor Day Holiday

October 1 Copy Deadline, Winter Issue of *The Register*

October 11–13 ALDHA Gathering, Pipestem, W.Va.

October 14 ATC Offices Closed—Columbus Day Holiday

October 27 Last Day ATC Information Center open for weekends & holidays

November 22–24 ATC Board of Managers Meeting, Location TBD

November 28–29 ATC Offices Closed—Thanksgiving Holiday

December 25 ATC Offices Closed—Christmas Holiday

## Subscription update

Thanks to those of you who responded to our request in the winter issue to let us know if you wanted to continue receiving *The Register* by mail. As this issue goes to press, we have heard from about 900 people asking that the newsletter continue to be mailed to them.

We also have heard from a number of people asking us to cancel the printed subscription and indicating they will read the issues as they are posted on our Web site. A listserve has been established to notify interested persons by e-mail when a new issue is posted. To subscribe, send an e-mail message to <[autosshare@atconf.org](mailto:autosshare@atconf.org)> with the following message in the body of the e-mail: SUB REGISTER-L. To unsubscribe from that list, send an e-mail to: <[autosshare@atconf.org](mailto:autosshare@atconf.org)> with the following message in the body of the e-mail: UNSUB REGISTER-L. Alternatively, go to *The Register* page on ATC's Web site at <[appalachiantrail.org/about/pubs/register/index](http://appalachiantrail.org/about/pubs/register/index)>, and click on the links to subscribe or unsubscribe to the list. The current issue and other recent issues are posted at that site also.

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