

Making a Difference Against Invasive Plants on the Appalachian Trail

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ALONG THE APPALACHIAN NATIONAL SCENIC TRAIL INVASIVE PLANT CONTROL IS RELATIVELY new in spite of the long history of volunteer-led trail management. With increasing public awareness of negative impacts associated with invasive species, there is increasing energy to tackle invasives along the Trail. The nascent short-term volunteer program along the Northern Virginia section is a model for other sections of the Trail.

Meeting the challenge

The Appalachian National Scenic Trail (Trail) inaugurated its Short-term Volunteer Project with Earth Day 2008. Need for a program became apparent when funded management efforts through the Mid-Atlantic Exotic Plant Management Team (EPMT) could not keep up with the existing and expanding invasive species situation along the Trail. Cooperating with the National Park Service (NPS) and Appalachian Trail Conservancy (ATC), the Mid-Atlantic EPMT formed the pilot program to focus on the Northern Virginia section with two goals: increase public understanding about invasive threats and accomplish work in the field to protect Trail resources. The pilot is a collaborative venture in setting priorities, garnering support, reaching the public, and conducting fieldwork.

Several invasives are emblematic of the growing threat to natural and cultural resources. Mile-a-minute vine is a relative newcomer to America, accidentally introduced from Asia. It spreads like a wildfire in two ways. Its own vegetative expansion is very rapid. It also produces thousands of berries from mid-June through September, which birds eat and pass through their digestive tracks to deposit out ahead of the main infestation.

The Blue Ridge Mountains are also impacted by new species that were originally planted to enhance game bird habitat. Recognized too late as invasive, they now dominate large areas. In the northern Virginia stretch of Trail, such species include autumn olive, multiflora rose, and wineberry, among others. Many plants were introduced for a variety of reasons and are now problematic.

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Figure 1. Mile-a-minute vine invades the Trail near Front Royal, VA. Here, children from Friends of the National Zoo Nature Camp pull down the invader, July 2008.

Getting results

During the period April 2008 to November 2010, the pilot program generated more than 1,350 volunteers who contributed 3,960 hours to invasive plant control. The pilot is made up of three aspects: group events by appointment, special events open to the general public, and a speaker's bureau to provide talks in the public square.

Events by appointment. Group appointments draw the largest source of volunteer field help, 93% of all volunteer time. Direct recruiting of groups by telephone is effective in generating first appointments. A localized database of potential volunteer organizations and individuals was created by the Mid-Atlantic EPMT and now contains 432 records. Groups include middle and high schools, colleges, summer camps, special interest organizations, and clubs. School and college groups are most available in spring and fall, while summertime sees more scouting groups, youth camps, interest groups, and clubs.

Repeat events by groups are common. Once a group experiences its first field event, 64% of them make room for more in their future. That indicates strong identification with the NPS mission and keen interest in these events as service learning opportunities for their members.

Group events generated over 1,250 volunteers who contributed more than 3,400 hours of their time controlling invasive plants. Groups helped control garlic mustard, Japanese stiltgrass, Oriental lady's thumb, mile-a-minute, Oriental bittersweet, wineberry, autumn olive, and Japan -

ese barberry, among others. Work groups help protect native species and preserve natural and historical landscapes.

Special events. Earth Day is nationally observed April 14 each year. The Trail participates by recruiting school groups to work on the 14th itself and by setting up special events on Saturdays near the date. Earth Day events serve as a seasonal kick-off for the program. Spin-off benefits include increased Trail visitation during the typically low spring period of attendance and creating an opportunity for spring wildflower appreciation. In springtime, volunteers uproot invasive garlic mustard that threatens state-rare assemblages of nodding trillium nearby.

National Public Lands Day (NPLD) is held on the last Saturday in September. It is an excellent opportunity to capitalize on the national advertising of the NPLD organization. The Trail's project work site is listed in the NPLD website and draws people from Northern Virginia and surrounding areas. In the fall, volunteers uproot Oriental lady's thumb and Japanese stiltgrass, and cut invasive shrubs and trees.

Special events draw about 7% of all volunteers, contributing over 530 hours of labor. Though that is a small part of the project's total, special events are important in two ways; they offer a venue for individuals to plug into who are not part of a group, and create media advertising which increases public awareness of invasive species threats.

Public Speaking. Long-term volunteers and the Mid-Atlantic EPMT director provide talks to schools and other public forums. Most often, presentations are on the topics of invasive species biology, general ecology, NPS careers, and benefits of volunteerism. There have also been radio and TV interviews regarding invasive species challenges and upcoming volunteer events.

In the three years of the Trail's short-term volunteer project, public speaking efforts reached several thousand people. Speaking engagements included media interviews, school presenta-

Figure 2. One of several groups that attended Earth Day! events, April 2010.





Figure 3. National Public Lands Day volunteers proudly stand behind a mountain of stiltgrass, wineberry, and Oriental lady's thumb, September 2010.

tions, professional conferences, and public forums with clubs, community fairs, and colleges. Long-term volunteers are to date most comfortable giving brief talks at volunteer events and working at community fairs where they hand out literature and engage the public in conversations about their own roles in volunteerism.

These efforts help inform the public about invasive species problems and indicate how people can help reduce future invasive problems at home by use of native nursery stock in their own gardens. Our hope is that people not only become energized to join volunteer field events but also change their own buying and planting habits and advocate for programmatic initiatives for early detection and landscape restoration.

Long-term volunteers

A spin-off of the short-term volunteer program is development of individuals who are willing to become long-term volunteers to help run volunteer events and speak to the public. To date, five people volunteer their time in that way, contributing many hundreds of hours. On several occasions they also led field events without NPS assistance.

Assessments: An honest look at the pilot

Public outreach. The means for conveying information to the public is highly varied. The project utilized both direct and indirect communication methods for several kinds of external audiences.

Direct communication. The project reached volunteers at events with informal project orientations and introductions to invasive species issues. Literature was handed out in many cases. There were 56 volunteer events where we reached 1,345 volunteers with this kind of messaging.



Figure 4. James Åkerson speaks to an ecology class at Eastern Mennonite High School in Harrisonburg, VA.

We gave public talks with slideshows at schools and clubs (i.e., garden clubs, Rotary) on 16 occasions. These efforts reached 1,334 people. More formal yet, we delivered professional talks to NPS, interagency, and special interest groups (i.e., VA Association of Forest Health Professionals, and Natural Areas Association) on four occasions, reaching 399 people.

Indirect communication. We created and disseminated poster papers and reports for professionals and special interest groups. These reached a potential of 5,600 people.

Media outreach, the most indirect of all, took two forms during the period. Eight media interviews reached a potential of 541,700 households; and five media op-ed releases reached a potential of 1,185,200 households (from targeted circulation estimates of newspapers, radio, and TV outlets).

Steps to the future. Public outreach is not an easy thing to master. Our efforts to date have probably made a positive difference as measured by the number of people reached through volunteer events and the percent of repeat groups. Outside of that indicator, however, it is hard to gauge our effectiveness in conveying our message. In the near future we hope to evaluate our PR efforts in more formal fashion. Occasional pro bono PR assistance would greatly assist our effort.

Volunteer trends of the project

Volunteer events increased during the period, but more importantly, the relative amount of volunteer time increased, increasing from 2.4 hours to 3.2 hours per volunteer.

Steps to the future: Volunteer programs nearer to metropolitan areas have cultivated corporate groups as an important source of assistance. That remains an opportunity for the Trail project. Schools and universities remain the strongest link for signing up future groups. There remains a large source of candidate schools and other groups to cultivate in the database.

An effective group recruitment method has been to initiate dialogue by offering to speak to groups on topics of ecology and invasive species concerns. Willingness to schedule a first field event often follows. Outreach by the project's speaker's bureau is therefore an important link to cultivating new group participation.

There is no intent to increase the number of special events at this time. One springtime and one fall special event appears sufficient to create publicity for the overall program. Experience also shows that group events harvest more volunteers and hours of fieldwork than special events.

Barriers and aides to future development

A number of factors are at play with the development of the short-term volunteer program pilot.

Current barriers include the following:

1. Work accomplishment with short-term volunteers is admittedly inefficient, where relatively much time is spent in orientation and training compared to actual work. Though tempting, scheduling longer work periods (more than two to three hours) for most groups does not play out well. Volunteers are rarely able to perform stooping hand labor beyond a three-hour period. This is where as event managers we utilize lunches or hikes as a means for a break, and determine if a second work period is possible.
2. We would like every volunteer to have the opportunity to take home high quality printed materials on the issues surrounding invasive species. Such literature is expensive, requiring donations or grants to keep up a supply. That becomes a sizable task in making a successful program.
3. Fieldwork areas have tended to be within 20 minutes walk of trailheads (rather than longer distances). That helps capture more of the available volunteer time for actual invasive plant control. Consequently, more remote areas are not being treated at this time.
4. We have been surprised that neither Boy Scouts nor Girl Scouts have shown consistent interest in the project. Scouting is highly focused on achieving merit badges. We believe a stumbling block for Boy Scouts is the lack of a specific badge for invasive species management. That is not an easy problem to address at the local level.
5. Commuting to and from the Washington metro area is a stumbling block for developing weekday group field events. Much greater success has come from scheduling groups from local communities on the western fringe of the metro area.
6. Four of the five current long-term volunteer leaders reside in areas more than 45 minutes from targeted worksites. Two of the further away leaders speak of limiting their time to the program due to travel distance and expense. In the dark economic times of 2008-2011 and foreseeable future, it is not likely we will be able to assist with those costs. The NPS and ATC should consider establishing a support fund for these activities.
7. Resource managers with both the NPS and ATC have been slow to embrace invasive plant management with their own organizations. This is largely due to limited budgets and programs. In the case of the ATC, they may also see such a program as mission creep away from their clear mandate to maintain the tread-path and property boundaries. An invasive plant management program will admittedly require large capital outlay and sizable volunteer base with people excited for that aspect of resource protection. ATC should establish or increase a grant base specific to invasive plant management.
8. Resource managers with the NPS and ATC are reluctant to have volunteers working near documented rare species. It comes down to trusting volunteers with location information, and to work around such sites without causing harm by their field activities. Prior to the short-term volunteer pilot project, there was very little field management taking place,

other than periodical survey. The NPS and ATC should determine whether volunteer management activity is possible (on a case by case basis). The alternative is inevitable habitat impairment by invasive species.

9. The volunteer pilot is being led by the Mid-Atlantic EPMT due to their keen interest in providing invasive plant management along the Trail. Their time is limited due to the shared workload with 17 other parks. It is incumbent upon the NPS and ATC to find other means of programmatic support.

Positive aides include the following:

1. Volunteer leaders help make the program sustainable. Their efforts and commitment are rewarding to witness. They help with on-the-ground leadership and public speaking engagements.
2. Even the limited time spent on sponsorship support has met with positive results. That is especially true when seeking in-kind items such as snack and drink supplies for volunteer events.
3. The Shenandoah National Park Association has provided bookkeeping services for the modicum of cash donations.
4. The high world repute of the Appalachian Trail makes it easy to recruit volunteer groups. People look forward to visiting the Trail and getting in the “wilderness” found there. The Northern Virginia section is the closest section to the DC-metro area, making it a desirable and sustainable location for groups to commit to for volunteer events planning.

Conclusion

The Appalachian Trail has a long and proud history of volunteer management. The short-term volunteer pilot produced impressive results in its first three years of operations. Infested areas are being treated. The public is learning more about invasive species impacts to American habitats and rare species. Both personal and environmental safety is emphasized at every volunteer event. A growing number of groups and schools are becoming long-term partners for habitat protection through invasive plant management. Volunteer leaders are stepping up to help manage events and the overall program. The pilot program stands as a benchmark by which other programs can both benefit from and expand.

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