



Recovery in the Burned Area – November 2008

**The Friends of
Arlington's Great Meadows**

2008 Annual Report

Arlington, Massachusetts
www.FoAGM.org

A Brief Introduction and Some History

Arlington's Great Meadows (AGM) is a 183-acre tract of wild, natural land owned by the Town of Arlington and located in adjacent East Lexington. Long enjoyed by area residents as a place of natural beauty, AGM includes extensive wetlands, upland forests, grasslands, vernal pools, and other natural communities. It is home to a vast array of plants and animals, and a stopping-off place for many species of migrating birds. The largest natural, undeveloped area in Arlington or Lexington, AGM is a treasure worth protecting and improving.

The Friends of Arlington's Great Meadows ("FoAGM" or "the Friends") is a group of citizens of Arlington, Lexington, and beyond who are committed to the protection and stewardship of AGM. Under the leadership of the FoAGM Steering Committee, and with the assistance of many volunteers, the Friends work with officials of the Towns of Arlington and Lexington, and with citizens everywhere who share their interest.

How FoAGM Got Started. In the late 1990's, the Arlington Conservation Commission engaged botanist and naturalist Frances Clark to perform a detailed ecological study of AGM. Ms. Clark submitted a report in 2001 which included inventories of AGM's plant and animal species and made recommendations for the area's protection and enhancement. The Clark Report and subsequent publicity increased interest in AGM and led to the establishment of the Friends of Arlington's Great Meadows in 2002. The Friends carry out their activities with the approval and encouragement of Arlington's Board of Selectmen which, as the government body responsible for AGM, has recognized FoAGM as stewards of the Meadows.

Major accomplishments of the Friends from 2002 through 2007 include:

- Construction of two boardwalks, totaling 700 feet in length, allowing north/south passage across the wetland.
- Construction of a footbridge across Munroe Brook, allowing access to AGM from Orchard Lane.
- Maintenance of trails, two informational kiosks, and signage.
- The removal of trash, construction debris, rusting car engines, and other eyesores.
- Conducting a wide variety of educational programs to teach children and adults about nature and introduce them to the beauty and wonder of Arlington's Great Meadows.
- Ongoing control of invasive plants, especially Japanese knotweed.
- Building awareness of AGM through newspaper articles, event notices, group emails, the *FoAGM.org* web site, fliers, booths at town events, and more.

The annual report which follows presents the accomplishments of the Friends in 2008 and an update of happenings in Arlington's Great Meadows during the year. We hope you will find it interesting and useful.

2008 was another busy and productive year for the Friends of Arlington's Great Meadows. The highlights of this year's accomplishments are described below. We wish to thank everyone who has helped in one way or another with these efforts.

Education and Outreach

Each year the Friends sponsor a number of walks which teach people about nature at AGM. The Friends also carry out other programs and activities to study the Meadows' flora and fauna and to promote awareness of AGM and what the Friends are doing to protect and provide stewardship to this remarkable piece of wild land.

- **Nature Walks**

Third Saturday Nature Walk Series. On the third Saturday of each month from April through October of 2008, Steering Committee member Don Miller led a nature walk in AGM. These regular walks emphasized botany (since plants don't run away or fly away), but also considered all aspects of nature. Participants with special expertise were encouraged to share their knowledge with everyone. By repeatedly visiting specific locations, the series sought to help people see and understand the changes happening throughout the growing season. Most walks attracted 12 to 16 people.



Don Miller Leading a Third Saturday Nature Walk in June

Each month's walk included a visit to AGM's dry uplands. There, over the course of the growing season, we saw (just to name a few of the species identified): pink lady slipper, blue curls, blue toad flax, wild indigo, sweet fern, little bluestem, British soldiers, bear oak, and American hazelnut. Each walk also included a visit to the wetland along the Lily Pond Boardwalk, where wetland shrubs and herbaceous plants crowd in close, vying to be seen. To again name just a fraction of the flora and fauna identified, we saw in this wetland area: blueberry, male-berry, button bush, swamp milkweed (with hoards of tiny, yellow insects crowded on the upper stems), speckled alder, marsh fern, boneset, Joe Pye weed, and (gulp!) poison sumac. Sometimes we visited Monroe Brook and Infinity Pond, and walked through the open woodcock grounds. Most walks included a visit to the hill above Infinity Pond where an

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extensive forest fire had occurred in the early spring (see page 6 below) to see what progress nature was making in recovery. Within a couple of months, we were delighted to see evidence of a shiny, green resurgence, albeit among charred stems and branches of shrubs and trees (see cover photo).

As the months passed, we saw buds opening, leaves and flowers coming to life, fruits forming and their seeds getting ready to travel by various means as “fliers”, “hitchhikers”, “passengers”, or “shooters”. We watched leaves turning color and marveled at stick-tights and the male-berry’s five-parted woody capsules, which helpfully cling through the winter to permit the plant’s identification. Over the course of the growing season, we enjoyed many pleasant forays in nature with people who share a common interest. The Friends hope to have a similar series in 2009, perhaps starting earlier and ending later.

Cub Scout Nature Hike. In October, Don Miller led a Cub Scout group on a nature hike in AGM, leaving from the Waldorf School area. Four cub scouts, a younger sister, and several dads and leaders joined in. The scouts (and the younger sister, too) quickly learned to identify sumac, oak and maple leaves, glossy buckthorn, and even the buds and “leaf scars” on the late-summer twigs of shrubs and trees.

Walks Sponsored by Other Organizations. Other groups have also used AGM for nature activities. In May, the New England Wildflower Society sponsored a walk led by naturalist Boot Boutwell. Citizens for Lexington Conservation (CLC) and local birding groups have also sponsored events at AGM. A big attraction continues to be the Woodcock mating displays which can be observed in the early Spring.

If anyone knows of a group interested in a guided walk at AGM, we have several leaders available. Please contact Don Miller, 781-646-4965 or donaldbmiller@comcast.net, for more information.

• Science in the Meadows

Firefly Citizen Science Project at AGM. During the summer, Andrea Golden, a naturalist and former FoAGM Steering Committee member, gathered data on fireflies in the Meadows as part of a statewide firefly study to determine why fireflies seem to be declining. The Museum of Science (Boston) has teamed up with researchers from Tufts University and Fitchburg State College to learn about the geographic distribution of fireflies and their activity during the summer season, and has enlisted volunteers to gather data. Using a Citizen Science website, the project offers an opportunity to learn how to collect scientific data in a manner that is both useful to firefly researchers and fun for the whole family.

After making a number of nocturnal observations in the Meadows throughout the summer, Andrea submitted the following report: “The wet meadows at AGM are excellent firefly habitat. We observed fireflies weekly from mid-June until early August. Fireflies were very abundant into early July, subsiding later in the month. Our last observation was August 9th, when we saw no fireflies. We plan to start observations in May next year to determine the start of the firefly season, as it was already at its peak in mid-June. There appeared to be at least two flash patterns at AGM, suggesting multiple species of fireflies. We verified one, a Photinus sp. firefly collected from a spider web.”



Timed Exposure of Fireflies in June

More information about the Firefly Watch project can be found on this link of the Museum of Sciences website: <https://www.mos.org/fireflywatch/>.

Bird Survey. A researcher from Tufts University conducted marsh bird surveys and aquatic invertebrate sampling as part of his Ph.D. thesis work.

Bees Project. We were pleased to award Joe O'Regan from The Waldorf School the first grant under FoAGM's new educational mini-grant program (see below) to help finance the building and installation of beehives in the northeast section of Arlington's Great Meadows. Under Joe's guidance, third grade students from the Waldorf School built two hives and installed them in late May among birch trees, black raspberries and blueberry bushes in a spot that provided enough sunshine for the bees. One hive quickly started to thrive, but after a week it was apparent that the other had lost its queen and was diminishing. The colony from the second hive was incorporated into the first hive, and a replacement colony was put in the second one. For the remainder of the season, both hives were robust and active.

Despite the wet summer, the hives did extremely well. In September, the now-fourth graders extracted honey from the hives' combs with a hand crank, and each student was given a jar of honey to take home. This project generated much interest at the Waldorf School. Many classes and teachers went out to visit the hives, and regular reports were written in the Waldorf School's bulletin. There is a lot of enthusiasm for possible future bee-related activities including building more hives, one or more public walks to learn about the honey bees, and wildflower identification projects.

Unfortunately, the 2008 bee story ends with a sad chapter. The hives were repeatedly vandalized in November and had to be removed to ensure their safety. We will seek ways that the hives can be made more secure so that the project can continue in 2009.



Collecting Honey in September

- **Community Outreach**

Educational Mini-Grants. 2008 was the inaugural year for the FoAGM mini-grant program, which offers grants of up to \$250 to finance educational projects in the Meadows. The first grant was awarded to Joe O'Regan from The Waldorf School for a project involving the building and installation of two beehives in Arlington's Great Meadows, as described above.

FoAGM will continue in 2009 to accept applications for mini-grants for research or artistic projects in Arlington's Great Meadows involving students from grades K-12. Application forms are available on our website. Submissions are due in November and awards are made in December.

Minuteman Bikeway Celebration for the Rail-Trail Hall of Fame Induction. The Minuteman Bikeway forms the southwest boundary of AGM and, with annual traffic of an estimated 5 million users, provides the Meadow's greatest exposure to the public. This year, the Rails-to-Trails Conservancy (RTC) named the Minuteman Bikeway as the fifth inductee to the Rail-Trail Hall of Fame. To mark the occasion, a rolling celebration was held in October in the four communities through which the trail passes.

FoAGM participated in several ways. On the bike path behind Waldorf School, Steering Committee members staffed an informational table with literature and guidebooks, and answered questions from bike path users. FoAGM also posted an easel illustrating the work of the knotweed removal project at the most expansive vista of the meadow that is seen from the Minuteman bike path.

At the Lexington Center stop on the celebration, FoAGM was one of a number of community groups with informational tables where a crowd was present to honor local bikeway founders and partake in festivities. Steering Committee member Laurel Carpenter was interviewed for local access television about the FoAGM knotweed removal project. FoAGM's connection to the bike path receives ongoing publicity through its listing on the Minuteman Bikeway website: <http://www.minutemanbikeway.org/Pages/intro.html>

East Village Fair. In October, FoAGM staffed an informational table at the 169th annual East Village Fair in Lexington. This historic and very well-attended event occurs on the community center formed by the grounds of the Stone Building, the Waldorf School, and Follen Church. The event includes participation from East Lexington community groups and is an important opportunity for FoAGM to maintain connections with these local organizations.

Potential Use of a Restored Stone Building. In September, FoAGM responded to a request by the Trustees of the Cary Memorial Library for letters of interest for possible future uses of the historic Stone Building located immediately in front of the Waldorf School. The Stone Building served as the East Lexington Branch of the Lexington Public Library for many years until it was damaged by water in 2007 and had to be closed. After conducting preliminary engineering and design work for restoration of the building, the Library Trustees requested input from the community to help determine the most appropriate use of the building.

FoAGM advised the Trustees that if the Stone building is renovated for public use, whether as a library, reading room, or something else, it would be an ideal location, in view of its proximity to the Meadows, for FoAGM to conduct its monthly meetings, to store and display maps, guides or other materials, and to conduct educational sessions. The Trustees expressed interest in accommodating such uses, and are expected to make a final decision on plans for the building in 2009.

Arlington Town Day. As in past years, representatives of FoAGM attended the Arlington Town Day in September to provide information about the Meadows and to hand out trail guides.

Resource Management

Habitat Restoration Project. Among the unique features of Arlington's Great Meadows are upland grassy areas which botanist Frances Clark called "sandplain grassland". Growing on dry, sandy soil left by the last glacier as it receded more than 10,000 years ago, these areas are similar to grasslands found on Cape Cod and the Islands. In her 2001 report, Ms. Clark predicted that, in the absence of fires, AGM's sandplain grasslands would gradually fill in with shrubs and trees, eventually becoming forest. Her prediction is fast becoming true.

The largest sandplain grassland, located near the parking lot of the Golden LivingCenter of Lexington, is filling in rapidly as tall shrubs and trees – particularly smooth sumac, quaking aspen, and gray birch -- spread quickly. Saplings of oak and wild black cherry are also growing in, as are invasive plants such as European buckthorn and multi-flora rose. Similar developments are occurring in two smaller sandplain grassland areas, one approximately 500 feet southwest of the northern FoAGM kiosk, and the other on a contiguous Lexington conservation property, known as Joyce Miller's Meadow, that is part of the AGM ecosystem.

This year, the FoAGM entered into a contract with the Massachusetts Audubon Society to do a study of these three sandplain grassland areas, and to make recommendations on how best to manage them in the future. Some questions the study is expected to answer are:

- Should these areas be returned to grassland or maintained as shrubland?
- What would be the impacts on flora and fauna of such decisions?
- What would be best for the overall bio-diversity of AGM?
- What are the cost implications of restoration and ongoing management, and what sources of outside funding are available?

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Jeff Collins, Director of Mass Audubon's Ecological Extension Service, began the study this fall, and has completed most of the field work. His report is expected in early 2009, after which FoAGM will hold a public meeting to discuss its recommendations. Questions about this project can be directed to Don Miller at donaldbmiller@comcast.net .

Fire. In late April of 2008, AGM suffered a major fire. Youths playing with fireworks, during unusually dry and windy weather, sparked off a day-long conflagration which ultimately burned around seven acres of the hill just south of the Golden LivingCenter building and next to Infinity Pond. Fire departments from several towns were called in to control the blaze. The fire in AGM coincided with another large brush fire in different part of Lexington. This situation, combined with paths too narrow for a fire vehicle and the absence of local sources of high pressure water, taxed the resources of regional fire departments. Nevertheless, the fire was contained in a timely manner with no injuries to people and no damage to any structures. There was extensive press coverage of the fire, including video on the *Lexington Minuteman* newspaper's web site.

Shortly afterwards, members of the FoAGM Steering Committee met with representatives of the Lexington Fire Department to tour the burned area and to discuss what might be done to improve access for emergency vehicles. The primary focus of discussion was ensuring access for fire and emergency vehicles to as much of the AGM uplands as practical, including provision for fire crews to escape safely should a fire take an unexpected turn and trap them.



Aftermath of Fire at AGM on April 23

FoAGM agreed to work on several action items to assist fire and emergency crews in servicing AGM, including designating and maintaining strategic trails as fire roads with enough clearance for large vehicles. These decisions must strike a careful balance between providing as complete emergency access as practical while maintaining the narrow wooded character of the trails preferred by visitors. The fire department is understanding and respectful of conservation needs. The adjoining Joyce Miller Meadow Lexington conservation area will be part of the fire road plan because it has a good access point on the Minuteman Bikeway, affording emergency access to a large section of AGM.

In late fall, the burned area was still recognizable to the untrained eye, but native vegetation had rapidly sprouted from burned stumps and trunks to make the area surprisingly green. FoAGM is closely observing post-fire changes as they occur and, based on preliminary appearance, are hopeful that the burned area will recover substantially in a few years. The photograph on the cover of this report shows the luxuriant regrowth of low shrubs turned scarlet in late Fall.

Maintenance. Routine maintenance in AGM this year included the trimming of brush along trails and the removal of deadfall blocking signs and trails. In spite of vigorous plant growth encouraged by an unusually wet summer, individual *ad hoc* volunteer efforts were sufficient to keep up with this task, thanks in part to thorough trimming in previous seasons. Litter collection again was not a problem due to reliable, opportunistic help from regular visitors.

Nursing Home Parking Lot Trash. Deposition of trash and construction waste in and around the parking lot of the Golden LivingCenter of Lexington (formerly the East Village Nursing Home) has been a chronic problem. The LivingCenter's executive director, Clyde Tyler, has taken proactive measures to address this issue, including the repair of nighttime lighting of the lot and the immediate removal of construction waste to discourage further dumping. To assist the nursing home in keeping the parking lot clean, FoAGM purchased an industrial trash barrel this year and chained it to the sign post near the AGM trailhead, a peak litter location. The executive director has agreed to have his staff empty the barrel regularly, and the parking lot is now looking much better than in past years.

Other Issues. Some unwanted activities continued to take place at AGM, but appear to have been less frequent this year:

- Preliminary observation indicates that the dumping of yard waste may be diminishing after the installation in 2007 of signs at locations where this activity was prevalent; however, it is probably too early to judge for certain the overall success of that solution.
- Other activities that typically occur in municipal open space (under-age drinking, littering, petty vandalism) continue to occur in AGM, but seem less frequent than in prior years.
- Ironically, the spring brush fire consumed much of the would-be native fuel in one of the most popular illegal bonfire locations in AGM, and effectively reduced that activity dramatically in 2008.
- Only one dog-related complaint was heard in 2008, from an abutter who had problems with dogs straying into his yard.
- A plywood platform in a tree was dismantled and removed.
- Two beehives which were part of an education project were vandalized in the Fall.

Management of Invasive Plants

For a fourth year, the Friends have continued their experimental efforts to eliminate Japanese knotweed (JKW) in a stretch along the bikeway. In the short term, these efforts have enabled passers-by to see a beautiful view of the wetland instead of a dense wall of foliage which blocks the view and prevents other plant species from growing. The longer-term question is whether any of the experimental methods employed will make possible the eradication of this extremely resilient invasive plant on a more permanent basis.

As mentioned in previous annual reports, FoAGM has used two experimental methods to battle the JKW, neither of which involves herbicides. One method (which we have labeled “cut, dig and cover”) is to remove old stalks, dig out as many of the energy-storing rhizomes as

possible, and cover the ground with black landscape plastic for an extended period of time in an effort to destroy any remaining root fragments. The other method (which we have labeled “cut, cut, cut”) is to periodically cut or pull the knotweed shoots as they come up throughout the growing season, with the hope of depleting the energy stored in the rhizomes and eventually killing the plants.

The results in the “cut, dig and cover” area have not been particularly encouraging so far. We removed the black plastic from half of this area two years ago and planted it with native grasses. Since then, the knotweed has been less vigorous, but numerous new shoots have sprung up through the grass and needed occasional pulling throughout the growing season. We are anticipating that the other half of this area will be uncovered and planted in the fall of 2009. It remains to be seen whether the extra two years of coverage in black plastic will prove to have been more effective in killing the remaining fragments of knotweed rhizomes.

The results in the “cut, cut, cut” area are starting to show considerably more promise. For the first time this year, it was discovered that many of the JKW plants which had been cut on a periodic basis for several years could be uprooted by hand with relative ease. More encouraging still, when some of these plants were uprooted, their root masses were covered with a white fungus and appeared to be rotting in places. (See photo below.) To capitalize on this development, we organized a “pulling party” in the fall and were able to pull out by their roots many of the JKW plants in a large section of the “cut, cut, cut” area. It is our hope that the remaining JKW plants in this area are sufficiently damaged that they can be removed next year, and that the “cut, cut, cut” method will prove to be a cost and time-effective solution that can be extended to other areas.



Rotting JKW Root Mass

Our 2008 invasive plant control efforts also continued to include the removal of garlic mustard, beginning in May with a work day by a group of students from Waldorf High School in Belmont, and continuing throughout the growing season.

Are You Willing to Help? Much work remains to be done on invasive plants, both along the bikeway and in other locations in the future. People willing to help – even for just a couple hours on one occasion – are encouraged to contact Don Miller, 781-646-4965 or donaldbmiller@comcast.net.

Legal Protection Of Arlington's Great Meadows

Legally, Arlington's Great Meadows is classified as "surplus municipal land of the Town of Arlington", not a conservation area. The Friends of Arlington's Great Meadows continue to be committed to permanent protection for the entire property through the best legal means possible. Two possible strategies are (1) a conservation restriction, or (2) designation as conservation land under Article 97 of the Massachusetts Constitution. We encourage anyone who is interested in pursuing permanent legal protection for AGM to contact us.

Financial Report

Despite the financial turmoil of 2008, donations were up slightly from last year. Historically, many "year-end" contributions don't arrive until early January, so the true impact of the downturn of the economy won't be known until later in 2009. Also, we expect a decrease in total balance in 2009 due to an expected large expenditure of \$2,845 to Mass Audubon Extension Service for the habitat restoration study. Nevertheless, FoAGM continues to be a financially healthy non-profit organization with growing resources and generous public support. FoAGM continues its successful partnership with the Arlington Land Trust (ALT) as fiscal agent.

A summary of the changes in FoAGM's fund balances as of the end of 2008:

2008 Income

\$2,112.50 in 24 donations, ranging from \$5 to \$500, average \$88
\$2,112.50 Total Income

2008 Expenses

\$ 140.97 Printing
\$ 250.00 Educational mini-grant
\$ 167.15 Trailhead trash container
\$ 558.12 Total Expenses

Fund Balance as of December 31, 2008

\$8,196.59 FoAGM fund balance at beginning of the year
\$1,554.38 Net change
\$9,750.97 FoAGM fund balance at year-end

We thank our new and reliable regular donors who contributed to the preservation of one of the largest natural open spaces in the Arlington/Lexington region. Those wishing to make a tax-deductible donation can make a check out to "ALT FoAGM Fund" and mail it to FoAGM, Box 492, Arlington, MA 02476, or use a credit card online at www.networkforgood.org (Enter "arlington land" in the search field and select state of MA. Select Arlington Land Trust and enter "FoAGM" as a designation.)

Mike Tabaczynski, Financial Officer

Acknowledgements

We would like to thank the following individuals and groups for their guidance, encouragement, physical labor, and other assistance to FoAGM, as well as countless others who helped us to complete a successful year.

Arlington Board of Selectmen	Lexington Christian Academy
Lexington Board of Selectmen	Lexington Conservation Commission
Arlington Advocate	Lexington Minuteman
Arlington Conservation Commission	Menotomy Bird Club
Arlington Land Trust	New England Mountain Bike Association
Golden LivingCenter-Lexington, Clyde Tyler, Executive Director	Students of Lexington High School
Citizens for Lexington Conservation	Waldorf School in Lexington
Emerson Gardens Condominium Assoc.	Waldorf High School of Massachusetts Bay
Friends of Lexington Bikeway	Arlington Police Department
Joe O'Regan of the Waldorf School	Jeff Collins of Massachusetts Audubon
Lexington Fire Department	Frances Clark
Lexington Garden Club	Andrea Golden

The Friends of Arlington's Great Meadow is committed to continuing its stewardship and protection efforts for the exceptional land we are fortunate to have so near. We hope our work will guarantee that all generations can enjoy and learn from it.

Respectfully submitted,

The Steering Committee

David White, Chair
Don Miller

John Bartenstein
Sandra Ruggiero

Laurel Carpenter
Mike Tabaczynski

How Can I Get Involved?

We encourage residents of Arlington, Lexington and neighboring communities to attend our meetings and to participate in our activities. Steering Committee meetings are generally held monthly and an Annual Meeting is usually held in the Spring. To obtain notice of these meetings, visit our web site at www.FoAGM.org and sign up for our email list. For those with a stronger interest, positions are available on our Steering Committee.

Photo credits: Fireflies – Barry Golden, Bee Hives - Julia Van Daam, Rotting JKW – John Bartenstein, Others – David White.

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