

**Adkins Arboretum Habitat Enhancement and Ecological Restoration Program
Shared Earth Foundation
2017 Final Report**

We have had a very exciting and productive year at Adkins Arboretum. We have undertaken many land stewardship and restoration projects that continue to explore and demonstrate unique management strategies for the various native habitats at the Arboretum.

Visitor's Center Wetland

We have had various volunteers help us with the wetland this year. We have worked with the Maryland Conservation Corps, an Anne Arundel Community College student, an intern from the Chesapeake Bay Environmental Center, an intern from George Mason University, and the State Highway Administration as well as several of our Master Naturalist volunteers. This year we have focused on controlling the oriental bittersweet and Japanese honeysuckle in the wetland. We have also worked on removing some of the woody plants that are quickly filling in parts of the wetland. With the help of these volunteers and our staff, we have accomplished a lot.



We removed the majority of the sweet gums along the bank of the wetland by the land bridge. By clearing this 30-foot section, we alleviated any pressure that the tree roots presented on the land bridge and we opened up a view into the wetland. We also cleared 500 square feet of Japanese honeysuckle and oriental bittersweet vines.



By clearing invasive vines and some woody plants that have cast a lot of shade into the wetland, we opened up space for wetland plants that we want to encourage. Since beginning clearing areas last year and into this year, we have seen more *Iris cristata*, *Hibiscus moscheutos*, *Chelone glabra*, *Lobelia cardinalis*, and *Impatiens*

capensis. The *Cephalanthus occidentalis* has also been prolific in filling in along the edges of

the wetland. We have seen more diversity in the frog and snake population, and the wetland has also supported a muskrat family. It is a wonderful habitat and learning space for our visitors and students.

We were awarded the Outreach and Restoration Grant by the Chesapeake Bay Trust, which funds enhancing the wetland through invasive plant removal and native planting, as well as investigating the possibility of raising the water level of the marsh through the use of an adjustable outflow pipe. We are particularly interested in this because it would serve as the most economical, efficient, and environmentally-friendly way of eradicating the canary grass that has colonized pockets of the wetland. Canary grass is extremely hard to remove and we do not want to apply pesticide as the pesticide would surely impact the surrounding water. By raising the water level, temporarily, we can change the growing environment for the canary grass and encourage the growth of native grasses there instead.

We have noted several areas where the desirable natives have come back on their own and plan on planting more of the native plants that we know will do well in that environment, in areas that we have been working on clearing. Consulting horticulturist Leslie Cario helped to develop a planting plan based on the areas that we have focused on clearing and evaluating what perennials were starting to come back, but could use some additional plants to really make an impact.



We partnered with the State Highway Administration District 2 team (above left) on one large area of the wetland that needed to be cleared. As part of their Day to Serve program, a group of six SHA employees came out to the Arboretum and worked hard to remove invasive vines, some trees, and a sizable multi-flora rose bush to clear the area to be planted in the next few weeks. After removing the large shrubs and trees, Allison Yates mowed down some of the weeds that remained.

In October, we worked with our Wetland Wrangler and Land Steward volunteers, as well as our Chesapeake Conservation Corps volunteer, to plant native plants throughout the wetland (above right). By the end of November, we will have planted over 1,000 native plants in the wetland. These native plants will help to add species diversity to the wetland and break up some of the masses of rice cut grass that have filled in the wet channels of the wetland.

South Meadow

In February, the Maryland Department of Natural Resources came out to assess and then do a controlled burn in the South Meadow. We were so excited to have this done as it has been a few years since the last burn. We burned the entire meadow and then in subsequent years will enter into a rotational burn. The meadow has grown back beautifully and is lush from the burn.



In March, under the direction of our consulting horticulturist, Leslie Cario, we seeded four species of native perennials after the meadow burn. We planted *Aster lateriflorus*, *Coreopsis lanceolata*, *Rudbeckia hirta*, and *Solidago* just before a rain storm that could water in the seeds. We don't expect them to bloom this first year, but hope to see them next year. They are planted along a few access paths within the meadow.



The burn cleared a lot of built up plant debris, but it did not kill the *Ailanthus altissima* that has colonized an area in the meadow. Allison Yates, Robyn Affron, and Kathy Thornton successfully completed their Private Pesticide Applicator Licenses in the early spring. Now certified as applicators, they have gone out into the meadow to cut down and immediately treat the stem of the plant with an herbicide. They have already cleared about 3,000 square feet of *Ailanthus* in the meadow and along the edge habitats.



Allison Yates worked on clearing and mowing a back portion of the meadow, which was overgrown with sumac. By mowing this, it opened and improved the view into the meadow.

Nancy's Meadow

Allison Yates has been working diligently on Nancy's Meadow. Nancy's meadow did not get burned with the South Meadow because it did not have the layer of dry plant debris necessarily to produce a good fire. Allison has also been working on clearing the *Serecia lespedeza* before it produced seed, as well as removing Bradford Pear trees that have seeded themselves.

Woodlands

In the areas of the property that our goats can't work, Allison Yates and her seasonal groundskeeper Ray Davis have been hard at work clearing *Serecia lespedeza*, *Ailanthus altissima*, and *Celastrus orbiculatus*.

In October, our Land Steward Kathy Thornton worked with a group of volunteers to remove a section of English ivy along our Upland Trail. There were many native woodland plants that we did not want to harm by spraying, so we hand weeded the area. By the end of the morning, we removed English ivy from about 4,000 square feet of the woods.



Goats

The Arboretum has continued the targeted goat grazing program with a specific focus on oriental bittersweet, which has been overwhelming some of the trees along the nursery road. The goats have a small shelter in their summer enclosure, but have been moved back to their larger barn on occasion when severe storms roll through.

Tiarella, Sunshine, Pearl, and Rosie continue to work hard at the Arboretum clearing invasive vines. They also continue to display their charm and personality when visitors come by. The goats are currently working on about a quarter acre section of woodland edge by the nursery road.



This year, the goats were the highlight of our annual Arbor Day Run! The run was even covered by a WBOC helicopter and we had about 100 attendees who came out to run for the goats.



We now have a “Meet the Goats” sign that we have put on the goat enclosure. To give our visitors a little more connection with the goats and to teach them what they help us with at the Arboretum.

Allison Yates continues to provide supervision and management of the goat herd, while Ray Davis, Robyn Affron, and Kathy Thornton help to provide goat care assistance.

Staff

We were excited to hire former Chesapeake Conservation Corps volunteer, Kathy Thornton, on as our Land Steward in August. Kathy works with various members of the staff on habitat restoration, invasive plant removal, and our native plant propagation and collections projects.

We are also excited to welcome on our new Chesapeake Conservation Corps volunteer, Blake Steiner. In addition to helping with environmental education and general operations, Blake has been helping on our habitat restoration and enhancement projects!





South Meadow Burn and Rejuvenation Time Lapsed Photo Collage



Entrance Garden designed by Claudia West