

# **Goats as an Ecological Management Option for Invasive Plants - Ecological Landscape Alliance**

**by Sandy Vorce**

Gotta get a goat. This was my mantra a decade ago while hacking through bittersweet, buckthorn, and multiflora rose in an attempt to reclaim a portion of meadow at Mass Audubon Habitat Education Center and Wildlife Sanctuary in Belmont, MA.

My wish was granted in 2010 when a neighbor, Liz Shaw, approached us with an offer to graze her sheep on a newly acquired three-acre parcel of meadow. I shared with Liz my desire for goats, and she offered to get some goats to supplement the sheep. We petitioned the Belmont Zoning Board of Appeals and received first a temporary and later a permanent permit for the use of domestic sheep and goats for the ecological management of open fields at Habitat.

With the help of friends and some Habitat volunteers Liz set up to target graze the meadow. The results exceeded our expectations. Not only were the meadows cleared of unwanted woody shrubs, and many invasive plants, but native grasses such as little bluestem emerged and flourished.

## **A Community Welcome**

The sheep and goats were fully embraced by neighbors and the greater community. Liz and other local farmers taught us a lot about livestock management and the benefits of targeted and rotational grazing. When Liz moved her sheep to her new farm in New Hampshire we took her up on the offer to keep and care for the goats at Habitat during the growing season so that the herd could continue to browse some of our 15 acres of meadows.

For the first few years, the goats spent their winters in New Hampshire. After a few years of this arrangement, it was suggested that we take on the goats permanently so in 2016 we retrofitted an old unused greenhouse into a winter goat pavilion. With the help of many volunteers we now care for the goats year-round.



The goats seek out invasive plants. Here they are rewarded with multi-flora rose.

## **Biting into the Job**

While the Habitat herd has become a much beloved attraction, it is also part of our Ecological Management Plan. The herd's job is to mow the meadows in a targeted way that helps control invasive plants while allowing native plants and grasses to flourish. Why are goats so good for invasive plant management? Goats are natural browsers and prefer to eat broad leaved and woody stemmed plants. They happen to love buckthorn, multiflora rose, and bittersweet, which account for most of the invasive plants in the Habitat meadows. When the goats eat the leaves and stems of invasive plants, it allows light and air to get to native plants and grasses, leveling the competitive playing field. Continual re-browsing of some invasive plants may also weaken them through carbohydrate starvation. By eating unwanted woody stems goats also keep the fields from reverting to forest, thereby maintaining a valuable meadow ecosystem.

Goats prefer to eat higher on plants. This is a natural protection against worms and other parasites located closer to the ground. Eating higher means the base of the plants are left in the ground and will likely re-grow without manual removal or treatment. In meadow restoration areas, a group of volunteers will often follow up a recently browsed area

with weed wrenches to pull out the remaining invasive plant roots. I can tell you it's much easier to remove a multiflora rose bush after the goats have eaten off all the thorny stems!



The herd wander through Weeks Meadow in search of invasive plants to nibble.

## Enjoying a Selective Diet

Goats like variety and are selective in what they eat. They prefer many invasive plants over some of the native plants and grasses in the meadow. I recently watched one of the goats carefully pluck bittersweet leaves and nip at the vine that was wrapped around a goldenrod without disturbing the pollinator covered flowers. The goats also eat poison ivy, a native plant, that grows unwanted on trail edges and program areas. Yes, they do like blueberries and other native shrubs, so we have to keep them away from our wildlife berry patches, except for occasional forays when we let them munch their way to the bushes, removing overgrowth as they go.

Goats do not like the taste of milkweed, which is good for the monarchs. Unfortunately, this also means they don't like black swallow-wort. They do eat a lot of the plants around black swallow-wort, which makes it easier for us to find and manage this pervasive invasive. For the most part goats self-select what they eat and avoid plants that would harm them. We keep the goats away from plants such as rhododendron that are highly toxic.





Electro-net fencing encloses the goats in a new browse area where they consume the bittersweet, leaving the goldenrod for the pollinators.

Like many of us who will eat that questionable jar of something in the fridge if there is nothing else to eat, goats left to browse too long in one area will move on from their favorite plants to other less desirable plants. That is one of the reasons rotational grazing is so important. Not only does this method allow each browsed area to recover and native plants and grasses to self-seed, but it is healthier for ruminants such as goats. By moving to a new area every week or two they leave possible intestinal parasites behind, and those parasites cannot survive long without a host. Goats fertilize the fields as they browse, and if we see the need to restore an area, we will throw down some native meadow seed mix a day or two before moving the herd to a new area so their hooves can push the seed into the ground.



The goats return to the greenhouse pavilion after munching in the meadow.

Goats are herd animals and tend to stay together. They will follow a group of people who they view as good protection due to our height. We herd our goats to the various meadows during the day and tuck them into wooden goat huts at night. Volunteers shepherd the goats while they are in the fields; they also answer visitor questions and ensure the goats have adequate shade, water, and protection. Because we are a busy Sanctuary, with lots of visitors, classes, and summer camp participants, we use electro-net fencing to enclose the herd in each new browse area. We attach a solar powered battery charger to the electro-net fence to send a current that provides enough of a shock to keep goats in and deter predators. On the quieter off-season days, one of my favorite activities is to walk the goats around the fields for what we call “free-browsing,” which is the way people and goats have wandered the land together for thousands of years.

## Intangible Benefits

This is where the cute comes in! Our herd of Nigerian Dwarf Goats is adorable. This breed is small and generally friendly. They each have their own personality, and they are emotionally intelligent. In addition to their meadow



mowing job the goats at Habitat also participate in a variety of programs from goat socials to goat education, and the herd self-adjusts their actions to different ages and abilities. Volunteers get trained to be Goat-Tenders, and we have an amazing volunteer community that cares for and cleans up after the herd.

While goats have plenty of free eats in the meadow, there are costs associated with keeping a herd from hay, minerals, tools, fencing, and shelter costs to annual vaccines and veterinary care expenses. Fundraisers and donations are required for our goat program to be self-sustaining. In this area, cute works to our advantage, and the efforts of volunteer-coordinated fundraising continues to keep our four-hoofed maintenance crew happy and healthy.



The goats are not only a hardworking, ecologically-focused maintenance crew, but each one is an adorable advocate for the [fundraising programs](#) that keep the herd happy and healthy.

Want to learn more? Join Sandy for an Eco-tour in Belmont, MA on September 24: [Effective Invasive Plant Management: Chemical-Free & So Darn Cute](#).

## About the Author

**Sandy Vorce** is a nature enthusiast and works as a Manager at Mass Audubon Habitat Education Center and

Wildlife Sanctuary in Belmont, MA. Sandy tends everything from gardens to goats and enjoys working with volunteers of all ages and backgrounds in caring for the property and its inhabitants. She is a former ELA board member and now participates with local Land Trusts and Climate Action groups.

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# Goats help tame overgrown slope at Wyman Park Dell

Hungry Centreville herd specializes in eco-friendly vegetation management

BY ANGELA ROBERTS

You've heard of the farmer in the dell, but this is a new one.

A battalion of 20 goats have been unleashed upon North Baltimore's Wyman Park Dell to do a job a lawn mower could not: tame the steep, overgrown sides of the bowl overlooked by the Baltimore Museum of Art.

The hungry horde arrived in the pocket park Thursday afternoon, carted in from a Centreville farm owned and operated by Eco-Goats, a company that specializes in

the kind of environmentally friendly — and adorable — vegetation control only goats can provide.

And the furry fiends have their work cut out for them. During the spring, as the coronavirus pandemic tore across the state, the organization that cares for the park wasn't able to host its monthly volunteer clean-up. Although these events are back on now, Friends of Wyman Park Dell President Cailin McGough said, the patch of land the goats have been charged with munching still could use some extra attention.

Lucky for the park's newest employees, the 0.65-acre hillside is ripe with multiflora rose plants and wineberries — two types of vegetation that McGough said are tasty treats for goats.

"We love our people volunteers, but *See **GOATS**, page 10*



KENNETH K. LAM/BALTIMORE SUN

Nubian goat Ferdinand, part of a herd of 20 Eco-Goats from Centreville, works to clear vegetation at Wyman Park Dell across from the Baltimore Museum of Art by eating it.



# GOATS

*From page 1*

sometimes there are just things that goats are better equipped to do,” she said.

This isn’t the first time goats have been brought on to tackle unruly slices of land in the Baltimore area. Since 2014, goats from Darlington’s Harmony Church Farm have been transported to Towson University’s Glen Arboretum to putter around for a few days, chowing down on invasive species.

Goats are good for vegetation control for a lot of reasons, said Brian Knox, president of Sustainable Resource Management Inc. and supervising forester for Eco-Goats. For one, he said, they can get at places machines and people can’t.

Though the slope at Wyman Park Dell is quite steep, Knox said the goats pranced up and down its incline like it was nothing. Their mouths and digestive systems also obliterate seeds from invasive species, “with almost no viability coming out the back end.”

It doesn’t hurt that they’re able to do the job herbicide-free.

Earlier in the year, McGough said, the Friends of Wyman Park Dell tried applying for a grant to fund a contract with Eco-Goats — and, presumably, cover the goats’ paychecks — but the organization wasn’t successful. As summer wound down, though, the group became resolute — it would find a way to pay for the project.

“We really wanted it to happen in 2020, because it felt like something fun that could happen in this horrible year,” McGough said.

The timeline was tight. As McGough explained, the goats stop their work after October, and don’t start back up again until after winter ends.

The volunteers launched a GoFundMe page in September, banking on the hope that Baltimoreans would find the concept of goat-powered vegetation control as fantastic as they did. They were right. In just a month, 80 people had chipped in, bringing the fundraiser’s grand total to \$3,540.

The organization’s unorthodox choice of lawn care fits within its overarching mission, McGough explained, to put Wyman Park Dell on the map. It’s a beautiful park with a ton of history, but because of its location — wedged between Charles Village and Remington, and hidden from its surrounding streets — many aren’t aware of its existence, McGough said.

But over the next few days, as goats feast on a pocket of the park’s 16 acres of land, that just may change.

McGough encouraged Baltimoreans to stop by the park to visit the hard-working goats, keeping a safe distance from each other and from the animals, of course. According to the group’s contract with Eco-Goats, the critters will be stationed in the dell for four to seven days.

It all depends on how hungry they are.