B Metro

Boston deploys goats against poison ivy in Hyde Park

By Faiz Siddiqui

GLOBE CORRESPONDENT JULY 23, 2014

The leader, Cole, ambled up to the metal fence, and with a wide stare and what looked like a grin, began to survey his new domain.

One by one, the others followed Cole through the gate: Chester, a fellow LaMancha goat with a paintbrush-like black tail; Dalia, an Alpine with perky white ears; and Christopher, another Alpine with a long gray beard that conjured up the image of a wise man.

It was not long before all of Boston's newest contract employees had disappeared among the tall trees and brush in Hyde Park's West Street urban wild. Their task: Help to clear 2 acres overrun with poison ivy, buckthorn, Asiatic bittersweet, Japanese knotweed, and other invasive species growing on Parks and Recreation Department property.

Best of all for the cloven-hoofed friends, these menaces are lip-smacking delicacies.

"It's not only cute, but it makes really good sense," said 27-year-old Jessica Muscaro, the project coordinator for the Hyde Park Green Team.

Department officials said it was the first time Boston has sought the help of goats for a city project. Officials say the hairy, four-legged weed whackers represent a fast, clean, and efficient way to clear the area for green space without using herbicides or loud and polluting machinery.

The four goats will live in the urban wild for eight weeks, protected by a solar-powered electric fence. People are encouraged to look, but not touch, as the poison ivy oils may stick

to the goats' coats, even though it does not harm their digestive tracts.

Teenagers from the Hyde Park Green Team will provide water and food to supplement the goats' diet , then begin pruning trees and building trails once the area cleared.

"Goats are an ecofriendly way to regulate overgrowth and manage pests and weeds, while giving nutrients back to the earth," Mayor Martin J. Walsh said in a statement.

Tony Barrows, who has lived in Hyde Park for 27 years, remembered taking his young daughter to the site, alongside the Neponset River, in the 1990s. That was before the trees had been choked by the Asiatic bittersweet and the trails covered by other invasive plants.

"I'd like to see some development along the river bank where people can jog, or just sit down, read a book," he said.

DAVID L RYAN/GLOBE STAFF

The goats will live on site at the West Street Urban Wild for eight weeks.

The $2,800 to rent the goats is being covered by grants provided to the Southwest Boston Community Development Corporation. James Cormier, owner of the Goatscaping Co. in Plympton, is providing the animals, which range from 120 to 170 pounds.

"It would be way more time-consuming for the city to come in and start chop, chop, chopping away," he said.

The community development corporation's assistant director, Pat Alvarez, said she came up with the idea to use goats after hearing about other cities using animals to make way for urban greenspace. Goats, sheep, llamas, and wild burros have cleared brush at O'Hare International Airport in Chicago. In Washington, D.C., goats helped clear the Congressional Cemetery in 2013.

Alvarez fondly remembered being chased around her yard by a "mean" billy goat as a child.

The four goats deployed in Boston were similarly mischievous Wednesday.

One began to chew on a Goatscaping sign dug into the dirt, prompting Cormier to yell, "Hey, don't eat the sign!" Another, Dalia, attempted to climb a tree before giving up.

But they soon got down to business. Christopher's beard flapped against his chin as he chomped on a leafy bush. Dalia's long ears wiggled as she chewed a dense shrub to the stem. Within an hour, small sections of foliage had been cleared.

"They're quiet, unlike machinery," Alvarez said. "We also think they're going to be great ambassadors for the urban wild. Plus, they're just fun."

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Examples of Interaction or Cycles:

1.) Goats like eating poison ivy, buckthorn, Asiatic bittersweet, etc., and therefore are clearing hazards in Boston park

2.) Goats will have poison ivy oils on them that could be transfered to humans if they touched the goats.

3.) Goats are clearing the area and preventing the use of machinery → they are a more sustainable option.

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The importance of honeybees

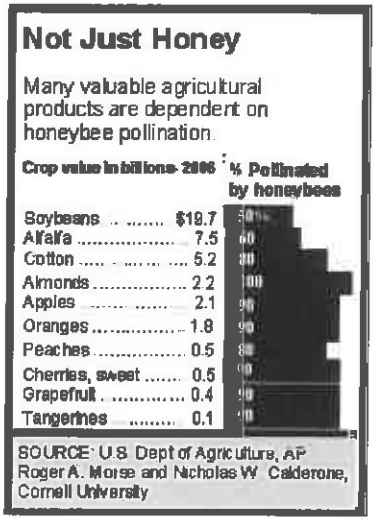
Take a look at the sheer number of plants that rely on these under-appreciated workers for pollination, and you'll start to understand what all the fuss is about.

MARIA BOLAND
May 3, 2010, 1:23 p.m.

Honeybees pollinate more than just flowers; they're a vital part of our agricultural cycles. (Photo: FrauBucher/flickr)

Just how important are honeybees to the human diet? Typically, according to the U.S. Department of Agriculture, these under-appreciated workers pollinate 80 percent of our flowering crops, which constitute one-third of everything we eat. Losing them could affect not only dietary staples such as apples, broccoli, strawberries, nuts, asparagus, blueberries and cucumbers, but may threaten our beef and dairy industries if alfalfa is not available for feed. One Cornell University study estimated that honeybees annually pollinate $14 billion worth of seeds and crops in the U.S. Essentially, if honeybees disappear, they could take most of our insect pollinated plants with them, potentially reducing mankind to little more than a water diet.

Bees are of inestimable value as agents of cross-pollination, and many plants are entirely dependent on particular kinds of bees for their reproduction (such as red clover, which is pollinated by the bumblebee, and many orchids). In many cases the use of insecticides for agricultural pest control has created the unwelcome side effect of killing the bees necessary for maintaining the crop. Such environmental stresses plus several species of parasitic mites devastated honeybee populations in the United States beginning in the 1980s, making it necessary for farmers to rent bees from keepers in order to get their crops pollinated and greatly affecting the pollination of plants in the wild. In recent years commercial honeybee hives have suffered from colony collapse disorder, which, for unknown reasons, left many bee boxes empty of bees after overwintering. Bee venom has also been found to have medicinal properties, used for treating arthritis, multiple sclerosis and even fibromyalgia, and more recently to treat sexual dysfunction, cancer, epilepsy and depression.



Pollination is transfer of pollen from the anther (the male part of the flower) to the stigma (the female part of the flower). Some plants can pollinate themselves: in this case, the pollen passes from the anther to the stigma inside the same flower, and this is

called self-pollination. Other plants need pollen to be transferred between different flowers or different individuals of the plant. This is cross-pollination. Many plants can be pollinated both ways. Plants can be pollinated by wind or animals.

Flowers pollinated by bees most often bloom in daytime, and can be different colors (though seldom red). The scent of daytime, bee-pollinated flowers tends to be less strong than that of night-pollinated flowers, often pollinated by bats or moths.

Honeybee-pollinated flowers have nectar tubes no more than two centimeters long. They have nectar guides (patterns to direct the bee towards the nectar) and often a landing place for bees. Bees are especially attracted to white, blue and yellow flowers. Plants pollinated by insects are called "entomophilous," and insects are generally the most important pollinators. Usually a honeybee can visit between 50-1,000 flowers in one trip, which takes between 30 minutes to four hours. Without pollen, the young nurse bees cannot produce bee milk or royal jelly to feed the queen and colony. If no pollen is available to the colony, egg laying by the queen will stop.

Humans' intense agricultural practices have greatly affected the pollination practices of bees within the U.S. The increased use of pesticides, the reduction in the number of wild colonies and the increased value of both bees and pollinated crops have all added to the importance of protecting bees from pesticides. Furthermore, many homeowners believe dandelions and clover are weeds, that lawns should be only grass to be mowed down regularly, and that everything but the grass should be highly treated with pesticides. This makes a hostile environment for bees, butterflies and other pollinators. Many bee poisoning problems could be prevented by better communication and cooperation among the grower, pesticide applicator and the beekeeper.

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Maria Boland originally wrote this story for MNN State Reports.

Examples of interaction or cycles:
1. Honeybees pollinate crops like apples, broccoli & strawberries. Without them we would not have those crops.
2. Insectisides sprayed on crops are killing honeybees.
3. Pollination is transfer of pollen from anther to stigma in the flower.

Metro

Ticks devastate Maine, N.H. moose populations

NATIVE RANGE INC.

A moose was captured for a tick count.

By Brian MacQuarrie

GLOBE STAFF JANUARY 13, 2017

An insidious pest is killing about 70 percent of moose calves across Maine and New Hampshire, and their deadly work is being aided by warming temperatures and shorter

winters that allow the parasites to survive longer, scientists believe.

They are winter ticks, which attach themselves to a single moose by the tens of thousands. Adult females can expand to the size of a grape and engorge themselves with up to four milliliters of blood.

"The moose are being literally drained of blood. This is about as disgusting as it gets out there," said Pete Pekins, chairman of the Natural Resources Department at the University of New Hampshire.

Pekins and UNH are at the center of the largest study of New England moose ever conducted, a three-state effort stretching across the woods of Maine, New Hampshire, and Vermont in which researchers are attaching tracking devices to the moose as part of an effort to learn how ticks are affecting them.

If the reduction continues, researchers said, the range of New England moose is likely to shrink northward. And for many moose that survive, the ravages of winter ticks could render them less healthy and less likely to reproduce.

"It's like a sinister, evil horror movie," said Lee Kantar, the Maine state moose biologist.

Examples of Interaction or cyles:

1. Winter tick is causing moose to lose too much blood, causing reduction in moose population.
2. Warmer temps + shorter days allowing winter ticks to survive longer.
3. Surviving moose will be too unhealth to reproduce, potentially