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## Gordie News, March 2007

West Chester University of Pennsylvania

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# GORDIE NEWS

(March 2007) 1:3

Erika Szonntag, editor

Gordon Natural Area for Environmental Studies

West Chester University of Pennsylvania

(A Certified Wildlife Habitat by the National Wildlife Federation)



## Special Announcements & Dates- MARK YOUR CALENDAR

### April:

**18<sup>th</sup>**—Meet Me in the Biology Department; 5:30-9PM PM; Schmucker Sciences Center North; Room SSN 379 & 381 (see last page of this document)

**21<sup>st</sup>**—Great Garlic Mustard Pull; Gordon Natural Area main gate at 10AM-12 PM; Lunch at noon

Contact Tara Speck (GNA Meeting Coordinator): [ts594055@wcupa.edu](mailto:ts594055@wcupa.edu); 610-436-2722

## :: What's New? ::

### Invasive species harms native hardwoods by killing soil fungus

An invasive weed that has spread across much of the U.S. harms native maples, ashes, and other hardwood trees by releasing chemicals harmful to a soil fungus (mycorrhizal fungi) the trees depend on for growth and survival. The tree-stifling alien, garlic mustard (*Alliaria petiolata*), first introduced into the U.S. in the 1860s as a culinary herb, has since spread to Canada and 30 states in the East and Midwest, with recent sightings as far west as Oregon.

While many mechanisms from the absence of natural predators or parasites to the disruption of long-established interactions among native organisms have been proposed to explain the success of invasive species, new research has shown for the first time that an invasive plant harms native plants by thwarting the biological "friends" upon which they depend for growth. The research, which provides striking evidence for a unique process by which invaders harm native species, was conducted by researchers at Harvard University, the University of Guelph, the University of Montana, Purdue University, and the



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UFZ Centre for Environmental Research in Germany.

While vanishing habitat caused by human activity is the number one threat to biodiversity, there is great concern over the impact of accidental and intentional dispersal of non-native invasive species across the globe. Researchers found that garlic mustard targets specific mycorrhizal fungi, which form mutually beneficial relationships with many forest trees. These fungi have long filaments that penetrate the roots of plants, forming an intricate interwoven network that effectively extends the plant's root system. These fungi depend on plants for energy and plants depend on the fungi for nutrients. When tree seedlings, which depend strongly on these fungi began to decline in the presence of garlic mustard, the researchers suspected that the invasive plant might thwart this symbiotic relationship.

Their research suggests garlic mustard invades the understory of mature forests by poisoning the allies of its main competitors. By killing off native soil fungi, the appearance of this weed in an intact forest could stifle the next generation of dominant canopy trees. It could also invite other native and nonnative weedy plants that currently grow in low-mycorrhizal fungal habitats, such as those disturbed by logging or development.

## **:: Great Garlic Mustard Pull ::**

*When?* Saturday, April 21<sup>st</sup> 2007 at 10 am -12pm (rain date [pouring] April28)

*Where?* Gordon Natural Area main gate east of the New St/Tigue Rd intersection

*Why?* Garlic Mustard is an invasive plant that compromises the health of other native plant life. It was introduced to the United States by European settlers because of its nutritive values and good taste in foods. This plant has become quite prevalent throughout the Gordon Natural Area and stifles other native plants, so some weeding is in order. Hope to see you out there!

## **Home Energy Saving Tips to Help Curb Global Warming**

1. Buy energy efficient light bulbs and turn off lights, electronics, and appliances when they are not in use
2. Choose recyclable products over disposal
3. Adjust your thermostat to lower in the winter and higher in summer. Even a few degrees can make a difference in energy use.
4. Wash clothes in warm or cold water, not hot.

- National Wildlife Federation

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## **Deer Eating Your Plants? *Try these solutions***

It is not rare for deer to feed on homeowner's gardens during the spring and summer months. Some plants they particularly enjoy are daylilies, garden lilies, hostas, hydrangeas, impatiens, and roses. Here are some commercial and homemade remedies to keep your garden looking its best:

Here is one homemade remedy made of cayenne pepper sauce (but any pepper sauce will do) and Redman tobacco in a water solution.

*Directions:*

Empty bag of Redman into a gallon of water and allow it to leach for a couple of days. Then add four ounces of hot sauce, mix, and apply to plants using a spray bottle. Reapply after a rain.

*The Scarecrow* is a motion activated sprinkler that fends off not only deer, but cats, dogs, rabbits, raccoons and other critters. It sprays up to a 35 foot stream of water for 3 seconds. One 9 volt battery will provide approximately 3000 bursts of water. Works on water pressure between 30 – 80 psi (use a pressure reducer at higher psi), is adjustable, and comes with a 24 month warranty ([www.usergardner.com](http://www.usergardner.com)).

*Liquid Fence Deer Repellent:* A simple spray for around the home and garden. As stated on the product's website:

- Environmentally safe and biodegradable
- USDA field tested
- Easy-to-use
- Long lasting and rain resistant
- Family & pet friendly
- 100% Money Back Guarantee
- Member tested and recommended by the National Home Gardening Club!

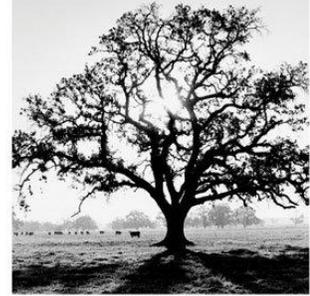
Visit [www.liquidfence.com](http://www.liquidfence.com) for more information

*Repellex Products* is a company which provides several types of repellent. One in particular is claimed as a top deer repellent, a solution applied to bulbs before planting to prevent digging and gnawing from deer. One treatment is effective for up to six months. Other Repellex products are available at [www.repellex.com](http://www.repellex.com).

## Benefits of Trees

Trees are necessary for the livelihood of every environment, habitat, and society. They have inspired art, poetry, and sustainability throughout all of history into the present day. However, trees provide benefits beyond aesthetic and therapeutic value. They are necessary for sustaining all forms of life, and if arranged properly can even benefit one's home in several ways.

According to the National Arbor Day Foundation, trees around the home can increase its value by at least 15 %, if not more. The U.S. Department of Agriculture (USDA) has found that “the net cooling effect of a young healthy tree is equivalent to ten room-size air conditioners operating for 20 hours a day.” Trees also cut heating bills by preventing wind from removing heat from around the home. They provide cool environments with shade, useful during warm summer months for making one's backyard a pleasant environment.



In addition, the USDA also reports that “one acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen. This is enough to meet the annual needs of 18 people.” Trees remove many pollutants from the air in addition to carbon dioxide; it is reported that 100 trees can remove 400 pounds of ozone from the air. Tree roots help prevent erosion and storm runoff along streambeds and hillsides, helping to keep water sources clean.

Trees also encourage a healthy variety of natural wildlife by providing a safe habitat and protection from the elements. Birds especially rely upon them for survival, so trees around the home can bring the avid bird watcher, or average Joe, a variety of bird species to enjoy.

So reconsider the temptation to chop that pesky pine or hardwood tree from your property. It could be the key to lower cooling bills, a source for summer shade, or a home to the birds that keep the bugs out of your garden.

## Tree-of-Heaven

Many recognize the Tree-of-Heaven as a symbol of strength and perseverance in Betty Smith's famous novel, *A Tree Grows in Brooklyn*. In reality the species is a sturdy and tolerant plant which is apt to appear almost anywhere, making it a difficult plant to eradicate.

*Ailanthus altissima*, or tree-of-heaven, is a non-native, invasive plant in the United States. It is native to Asia and in 1751 was introduced to England when a French priest brought it from China. It then came to the United States, specifically Philadelphia, in 1784 with William Hamilton who found the plant aesthetically pleasing enough to use in his garden. It was intended to provide food for a moth whose cocoons would be used for a silk industry. From there, the hardy, fast-growing plant took off and spread throughout New England and eventually across the entire United States.



These plants are fierce invaders, often seen in alleyways, railroad tracks, and roadways. They require little soil to grow, thus they are able to flourish in almost any environment. Tree-of-Heaven can grow as quickly as five feet per year and can reach 60 feet tall. It is characterized by a smooth gray trunk and dark green, toothed, compound leaves. Because of its rapid growth, this species can displace other native vegetation. It also produces toxins which could prevent other vegetation from flourishing. Its immature leaves emit a foul odor, and the plant produces pink blossoms in the summer. The sap may also cause *myocarditis*, which is the inflammation of the heart tissue. Four significant clumps occur in the Gordon Natural Area, three of which will be treated in 2007.

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## ***Check out these Websites***

### **You Bet Your Garden**

[www.youbetyourgarden.org](http://www.youbetyourgarden.org)

Spring is just around the corner...time to get digging! Mike McGrath of NPR offers advice for developing and managing your garden. He has authored several books, edited *Organic Gardening* magazine, and appeared on *The Today Show* as a garden expert. Visit his website for expert advice and gardening events and exhibits. Listen to Mike at 11am every Saturday morning at 91FM



### **Forests Forever**

[www.forests-forever.com](http://www.forests-forever.com)

Bask in the shade of the Camphor tree of Costa Rica. Notice the omnipresent moss on the floor of the Waipoua forest of New Zealand. Marvel at the colors of the Laurentians in Canada. Experience these and other forests firsthand through your PC! *Forests-forever.com*, a website designed by Fujifilm, is dedicated to spreading awareness of these and other beautiful, ecologically rich forests across the globe. Each of the 19 forest galleries includes breathtaking photography and information about each forest in an interactive manner. You will truly feel as if you have traveled the globe and trekked through these exotic woods.

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## Billion Tree Campaign

The United Nations Environment Programme (UNEP) has launched a campaign to plant trees all over the world. The Gordon Natural Area has pledged 100 trees thus far.

World target-pledged-planted/the Gordon Natural Area

Target



1,000,000,000/100

Pledged

819,348,609/100

Planted

8,029,736/38

Visit <http://www.unep.org/billiontreecampaign/> for more information

### The Life History of Gordie

Smoky the Bear was in fact a real bear. Today the cartoon bear is famous for his famous words: "Only you can prevent forest fires." In 1950 in the Captain Mountains of New Mexico, however, the real Smoky had to be rescued from after a severe forest fire.

After the fire had been contained, forest rangers and soldiers spotted a badly burnt cub clinging to the treetops and rescued him. They were unsure of where to take him when a local rancher agreed to care for the little cub. Word soon spread of the cub's rescue, and eventually he became a symbol of the damage forest fires could do and was thus deemed Smoky Bear.

Gordie, the "mascot" of the Gordon Area, has also been rescued and represents how the Gordon Area can be improved. He was found in a stream bed on April 26, 2006 by Dr. Gerard Hertel, battered and bruised. He was probably washed down stream during a stormwater episode. After cleaning up the stuffed pup, Dr. Hertel called the manufacturing company to see if animals like this one were still in production and found them to have been discontinued. He was then named Gordie and became the mascot and symbol of the Gordon Area.



Gordie Found April 26, 2006 in GNA



Gordie's first trip back to the GNA after recovery

Gordie meeting the kids at the Gordon Area work day!





**GNA Supporters:**

2004: Presidential Initiative (WCU); Environmental Council (WCU); USDA Forest Service; Henderson High School Environmental Club; Friends of the Gordon Area

2005: Wegman's; Yellow Springs Farm Native Plant Nursery; Environmental Council; Henderson High School Environmental Club; Friends of the Gordon Area

2006: Yellow Springs Farm Native Plant Nursery; Valero Energy Corporation; National Wildlife Federation; Henderson High School Environmental Club; Friends of the Gordon Area

2007: Pennsylvania Department of Natural Resources; WCU Alumni Association

Contact: [ghertel@wcupa.edu](mailto:ghertel@wcupa.edu); 610-436-2722; 484-883-3371

**APRIL 18**

**An Invitation for the Friends & Neighbors of the Gordon Natural Area**

- April 18, 2007; 5:30-9PM (come & go as your schedule permits; bring the kids)
- Department of Biology; Schmucker Science Center North; Rooms 379 & 381
- Rm: 379-drinks & desserts; Dr Tiebout's Snakes; Honor's Students GNA video promotional's [opening night!; walk down the red carpet]; other displays
- Rm: 381-discuss management of the Gordon Natural Area
- Invite your neighbors and/or those that you know use the Gordon Area