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Gordie News, November/December 2008

West Chester University of Pennsylvania

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GORDIE NEWS

(Nov/Dec 2008) 2:9

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-

Watch for Earth Week (April 18-25, 2009 activities)

Help save postage: If you have an E-mail we can add you to the Friends of the Gordon Natural Area (<http://www.gordonarea.org>) and other activities

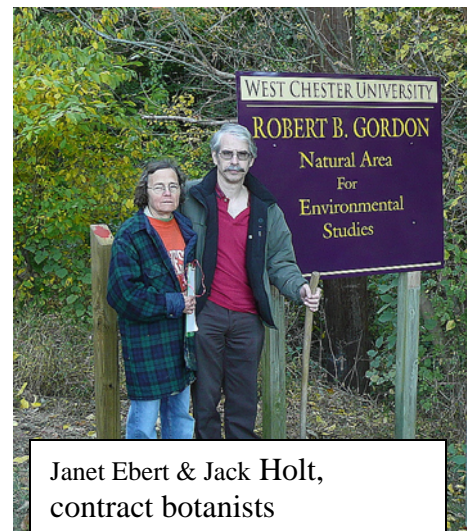
Contact Erika Szonntag with feedback or ideas for articles at
es631042@wcupa.edu

:: What's New? ::

Green with or without a lot of biodiversity: the future of WCU's Gordon Natural Area

The Gordon Natural Area (GNA) was established on the south campus of West Chester University in 1973. It came about as a direct result of the University's response to the first Earth Day in 1971. In 2006, the first financial support was provided to assure that the GNA's mission of education, research and protection of biodiversity could be fully realized. By 2007, 15 classes from five different Departments used the GNA. Four major research projects are ongoing that look at trees, deer, non-native plants and salamanders. Biodiversity has suffered over the years and efforts have focused on collecting base-line information so quantitative assessment of change can be made. With support of the USDA Forest Service 18 forest health monitoring plots were established in 2001/2 and in 2007 a total plant inventory was completed. This note highlights findings from both efforts.

There is some good news is that the contract botanists found 506 taxa of plants. The bad news is that 163 of these plants (32%) are non-native. Forty-two of the 163 are considered to be invasive. The big trees of the GNA are getting older and many are dying and falling to the ground. That is what should be happening. What is unusual is that there are too few young trees in the understory. This is a direct result of too many deer for too many years (a deer/invasive plant study is currently being funded by the Wild Resources Program of DCNR). The two native trees that deer do not seem to feed on-American beech and white ash-are



Janet Ebert & Jack Holt,
contract botanists

the future of the GNA. However, a non-native tree pathogen from Europe (beech bark disease) can be found within 100 miles of the GNA. A non-native insect from China (the Emerald ash borer) is in western PA and heading our way. So, what trees will make it without human-intervention? Two non-native trees, the Norway maple (even this species is in danger from another introduced insect, the Asian long-horned beetle) and tree-of-heaven, that are already too common (18% of the trees > 5 inches in diameter) in the GNA. Funds from the Governor's Tree Vitalize Program (through the Chester County Conservation District) allowed us to begin to replant part of a field and under plant a small area of our forest. Because of the deer we had to start with trees greater than six feet tall and a lot of effort has had to go into keeping them watered through drought like we have had this year (2008).

The 2007 survey found that 50 plants have disappeared from the GNA. The good news is that seven State-listed occur in small numbers.

WCU will continue to use a combination of internal and external funds along with a lot of volunteer labor to assure that future generations can see what a small forest fragment in this part of Chester County would have looked like if the resources had been available to manage all of our woodlands. WCU wants to be a good steward of its lands and in our Plan for Excellence a new Responsiveness Transformation sub-goal 7 (Encourage environmental awareness through training, curricula, and co-curricula programming, assess and reduce the ecological impact of the University, and promote research and service that foster regional and global sustainability) will help give focus and support for activities in the GNA

GNA Goes **Green** (I mean orange!)



Dr Hertel, Tara Speck and Pat Gardner (Tara & Pat work for the GNA and Environmental Health) pose with the re-stored **green (orange) machine for use by the GNA and EH. Dr Hertel and Gail Fellows (Director, EH) shared the cost of having the Motor Pool re-store this energy efficient vehicle.**

Integrated Pest Management Insights

The latest issue of IPM Insights is now online. Visit this link to read the articles:

http://northeastipm.org/NewsAndReports/2008oct/Oct08_index.html

Earth Week-2009 + or – two weeks! (& other winter/spring events)

Date	Activity	Location/Comments	Contact
today-August 1, 2009	Exhibit: What is open space?	Chester County Historical Society, 225 N. High Street, West Chester, PA 19380;	610-692-4800 (admission required)
Feb 5	Teach In: Global Warming Solutions Guest Speaker: Katie McGinity 7pm	Sykes Student Union Ballroom Sponsored by: WCU/4CP ; Environmental Council ; E.A.R.T.H. Group	http://www.nationalteachin.org/ WCU Environmental Council Joan Welch jwelch@wcupa.edu & Chester County Citizens for Climate Protection (4CP) Andrew Mongar andrewmongar@yahoo.com http://www.chescocooler.org/
Feb 19	Climate Change and Renewables	Chester County Citizens for Climate Protection (4CP) will lead a discussion on how climate change is affecting our watersheds. Find out what changes we can expect and what action we can take to reduce our impact. This presentation and discussion will focus on greenhouse gas emissions, the problems associated with coal and the challenges of ramping up renewable power supplies.	\$5/person, 6:00-7:30 PM Call the BVA at 610-793-1090 to RSVP. 1760 Unionville-Wawaset Road West Chester, PA 19382

Date	Activity	Location/Comments	Contact
Feb 21	An Open Space Forum Secretary DiBerardinis (DCNR) and panel: Molly Morrison, NLT Robert Lonsdorf, Brandywine Conservancy Joe Duckworth, Arcadia Land Co	Chester County Historical Society/	Beth Twiss-Houting btwissshouting@chestercohistorical.org 610-692-4800 x 235
Feb 24	Environmental Sustainability across West Chester University: Leading change: integrating sustainability across the curriculum w/ Dr Mitch Thomashow	Philips Board Room Faculty Forum 3pm	Paul Morgan pmorgan@wcupa.edu 610-436-6945
Feb 24	Environmental Sustainability across WCU: Students creating a sustainable future: stories from Unity College w/ Dr Mitch Thomashow	Location TBA Student forum 4:15pm	Paul Morgan pmorgan@wcupa.edu 610-436-6945
Feb 24	Dr Mitch Thomashow Bringing the Biosphere Home & Dr Roger Mustalish Bringing the Amazon Home	Schmucker Science Center Auditorium 7 :30	Marguerite Gould mgould@wcupa.edu or Paul Morgan pmorgan@wcupa.edu

Date	Activity	Location/Comments	Contact
Feb 25	Environmental Sustainability across WCU: Integrating the environment & sustainability into curriculum-Faculty Workshop w/ Dr Mitch Thomashow	Location TBA Faculty Workshop 9am	Paul Morgan pmorgan@wcupa.edu 610-436-6945
March 25	Wellness Fair (e.g. Green Campus Initiatives)	11am-2pm for faculty, staff & students	Alacia Hahn ahahn@wcupa.edu
March 28	Red Clay Valley Cleanup	Ashland Nature Center (Hockessin, DE) or Kennett YMCA Outdoor Pool at 8:00 AM	Call RCVA at 610-793-1090 for more information.
April 7, &(14, 21)	Tree Tenders training/PA Horticulture Society	113 Boucher Hall 6-9PM	Barley VanClief Pennsylvania Horticulture Society bvanclief@Pennhort.org 484-686-6745 Gerard Hertel Gordon Natural Area Dan Nece Grounds Maintenance dnece@wcupa.edu Environmental Council Joan Welch jwelch@wcupa.edu
April 14	Dr Bern Sweeney Stroud Water Research Center: WCU Research Day Speaker	Sykes Ballroom	Eleanor Shevlin eshevlin@wcupa.edu 610-738-0499
April (7) 14,(21)	Tree Tenders training/PA Horticulture Society	113 Boucher Hall 6-9PM	(see April 7)
April 16	Spring Greening:	How about Spring Greening your house this year! Learn simple tips for maintaining a healthy, eco-friendly home. Come prepared to open your mind to new ideas, and ready to open your home to a more sustainable, biodegradable and natural way to live.	\$5/person , 6:00-7:30 PM Call the BVA at 610-793-1090 to RSVP. 1760 Unionville-Wawaset Road West Chester, PA 19382

Date	Activity	Location/Comments	Contact
April 18	Special dedication for Dr Overlease-the Father of the Gordon Natural Area	WCU	Gerard Hertel Gordon Natural Area (Biology) ghertel@wcupa.edu 484-883-3371 Edith Overlease Georgann Cullen gcullen@wcupa.edu
April 18	4 th Annual Goose Creek Cleanup; Chester-Ridley-Crum Watersheds Association	West Chester 9-11	Anne Murphy info@crcwatersheds.org 610-892-8731
April 18	Focus the Nation: Seizing the Opportunities of the New Energy Economy – Together		http://www.focusthenation.org/
April (7, 14) 21	Tree Tenders training/PA Horticulture Society	113 Boucher Hall 6-9PM	(see April 7)
April 21	Movie: Taking Root: The Vision of Wangari Maathai	Sykes Theater WCU Displays: Sega School-Tanzania Helen's School-Kenya	Gerard Hertel and Andrew Barrett E.A.R.T.H. Group Ab655276@wcupa.edu And Fredrick Douglas Institute Christian Awuyah cawuyah@wcupa.edu Office of Sponsored Research Michael Ayewoh mayewoh@wcupa.edu Cheyney University: Office of International Programs Students of All Nations United Nations Association
April 24	Arbor Day	Gordon Natural Area	Greg Turner (Honor's Class)
April 25	Mushroom Wetland Planting Day	Off Ellicott Rd Avondale,PA 9 :30-12 Wear boots, bring hand shovel & prepare to get muddy !	Chester Co Conservation District Chotty Sprenkle csprenkle@chesco.org 610-925-420 x 103
April 25	Brandywine Creek Clean up	West Chester, Downingtown and Coatesville	Please call the BVA at 610-793-1090 for information.

Date	Activity	Location/Comments	Contact
April 25	Sheep & Wool Day	Springton Manor Farm	Chester Co Parks Glenn Nelson gnelson@chesco.org
April 20-24 (one day)	Dedication of outdoor laboratory/classroom	SSN/Boucher connector WCU	Gerard Hertel
May 2	Outdoor Fest and Trout Rodeo	Warwick Co Park	Glenn Nelson
May 2	Envirofest: Sustainable Living in Action Walk the Green Talk	1368 Prizer Rd Pottstown 9-4PM	Catharine Swan Green Valley Association cswan@greenvalleys.org
May 17	Family Nature Day with the BVA-	Fun, family-oriented activities at the beautiful Myrick Conservation Center	Please call the BVA at 610-793-1090 for information.

Contact Gerard Hertel for additions/corrections: ghertel@wcupa.edu; 610-436-2722

Some books

Green Design

- [Cradle to Cradle: Remaking the Way We Make Things](#) William McDonough & Michael Braungart
- [Natural Capitalism](#) Paul Hawken, Amory Lovins and L. Hunter Lovins

Nature & Ecology

- [Tropical Nature: Life and Death in the Rain Forests of Central and South America](#) Adrian Forsyth & Ken Miyata
- [The Diversity of Life](#) E. O. Wilson
- [The Song of the Dodo: Island Biogeography in an Age of Extinction](#) David Quammen
- [One River](#) Wade Davis

Climate

- [Hot, Flat, and Crowded](#) Thomas L. Friedman
- [The Carbon Age: How Life's Core Element Has Become Civilization's Greatest Threat](#) Eric Roston
- [The Weather Makers: How Man Is Changing the Climate and What It Means for Life on Earth](#)
- [Dire Predictions: Understanding Global Warming](#) Michael E. Mann and Lee R. Kump

Health

- [Living Downstream: A Scientist's Personal Investigation of Cancer and the Environment](#) Sandra Steingraber
- [Medicine Quest: In Search of Nature's Healing Secrets](#) Mark J. Plotkin

Society & History

- [Guns, Germs, and Steel: The Fates of Human Societies](#) Jared Diamond
- [Consilience : The Unity of Knowledge](#) E. O. Wilson
- [1491: New Revelations of the Americas Before Columbus](#) Charles C. Mann
- [Something New Under the Sun: An Environmental History of the Twentieth-Century World](#) J. R. McNeill, John Robert McNeill, Paul Kennedy

Green Legacy Project on North Campus

Every single tree (1580 trees) on North Campus has been visited and measured. All Global Positioning System (GPS) -based locations were started November 3 and will be completed before the semester ends. Why all this effort? In order to determine the full range of benefits the trees provide. Almost all are aware of the beauty trees provide and that they provide homes for squirrels and many different kinds of birds and insects. Trees also save energy (shade buildings and reduce cooling costs), store carbon, give off oxygen, take in pollution, and help minimize the impacts of stormwater in the Plum Run Watershed. The data being collected by student teams will be put into a USDA Forest Service computer model and its output will be the value of the benefits provided. These calculations will allow WCU administrators to determine the necessary resources to go toward maintaining the health and integrity of our trees.



Student crews will determine the position of every tree using GPS. They already have measured its waist size (diameter at 4.5 ft), its height, the volume of the leaves or needles, its exposure to the sun, and if there is dieback. The presence of tree decay, large dead branches and insect problems were also noted.

So, here is what the USDA Forest Service model will provide:

WCU tree structure (e.g., species composition, number of trees, tree density, tree health, etc.),.

Hourly amount of pollution removed by our trees, and associated percent air quality improvement throughout a year. Pollution removal is calculated for ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide and particulate matter.

Hourly tree volatile organic compound emissions and the relative impact of tree species on net ozone and carbon monoxide formation throughout the year.

Total carbon stored and net carbon annually sequestered (taken in) by WCU trees.

Effects of trees on building energy use and consequent effects on carbon dioxide emissions from our power plant.

Compensatory value of the forest, as well as the value of air pollution removal and carbon storage and sequestration.

Tree pollen allergenicity index.

Potential impact of pests such as [Gypsy moth](#), [emerald ash borer](#), or [Asian long-horned beetle](#).

Web site:

<http://www.itreetools.org/>

http://www.sciencedaily.com/videos/2007/1212-tree_tracker.htm

Thank you Yellow Springs **Native Plant** Nursery

Thank you Al and Catherine Renzi, owners, Yellow Springs Farm Native Plant Nursery, for donating trees for WCU's outdoor classroom and the Gordon Natural Area

Acorn watchers wonder what happened to crop

Starving and skinny squirrels offer clues to disappearance, botanists say

<http://www.msnbc.msn.com/id/27977375>

Sega Girls School, Tanzania

Dr Hertel was measuring trees on North Campus last September as part of WCU's Green Legacy Project when he noticed a woman with many cameras taking pictures. He introduced himself to Sarah Bones (<http://www.sarahbones.com/>), who had been contracted by WCU to do some photography. With so many cameras he asked if she had ever been on safari in East Africa. To his surprise she had been to Kenya and Tanzania but photographed people rather than animals. Their discussion led to her telling Dr Hertel about a new girls school (Sega) near a town (Morogoro) where Dr Hertel works in Tanzania. Nurturing Minds Inc (www.nurturingmindsinafrica.org) out of Valley Forge leads the way in this effort.. Take a look and see what you can do.

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 200 trees thus far. World target-pledged-planted/the Gordon Natural Area (December 3, 2008)

Target



7,000,000,000/200

Pledged

4,190,706,129 /200

Planted

2,587,878,773/175

Visit <http://www.unep.org/billiontreecampaign/>

Interesting Web Site

<http://www.epa.gov/watersense/>

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 (PA DCNR), Wild Resources Program; WCU Alumni Association; Darlington Biological Society; MENTA Café; Yellow Springs Farm Native Plant Nursery

2008: Redbud Native Plant Nursery; Aramark; PA DCNR, Tree Vitalize Program; USDA Forest Service; Yellow Springs farm Native Plant Nursery

Contact: ghertel@wcupa.edu; 610-436-2722; 484-883-3371

NO TRAIL BIKES ARE ALLOWED IN THE GNA – They have increased the length of trails by 300% and are impacting the biodiversity in the GNA.

DOGS NEED TO BE LEASHED – Students doing laboratory assignments have been attacked by unleashed dogs.

WCU Public Safety: 610-436-3311; 911 calls-tell them you are on Stadium Rd or Gordon Natural Area; WCU Public Safety will be first responder

