

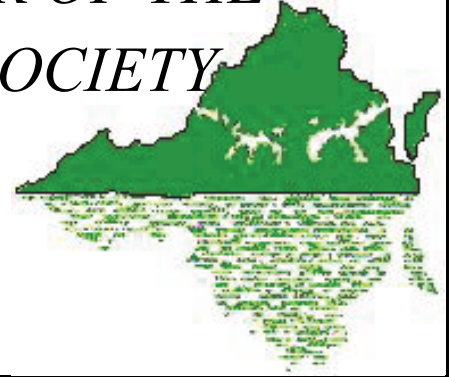
THE POCAHONTAS CHAPTER OF THE VIRGINIA NATIVE PLANT SOCIETY



Spiderwort

(*Tradescantia virginiana*)

January 2013



Chapter Meeting

Thursday January 3, 2013 at 7:00 PM

at the Education and Library Complex of the Lewis Ginter Botanical Garden in the Lab The room is available at 6:30, come early and Socialize

Our Speaker, John Roberts will present: *Paddling through Beringia: Wilderness, Whitewater, and Wildflowers: Canoeing and rafting the Nahanni, Mountain, and Napo rivers of the Yukon, Northwest Territories and western Alaska's Brooks Range*



Pocahontas Chapter Programs 2013

- February 9 Chapter Meeting, 10 AM - NOTE CHANGE OF DAY & TIME!** The February meeting is moved from Thursday, Feb 7 to **Saturday, February 9 at 10 AM** in order to encourage everyone to attend the special presentation at LGBG by Jackie Bailey Labovitz. She is a well-known photographer who specializes in Virginia wildflowers. Her web site provides an excellent sample of her beautiful photographs. This is a presentation you won't want to miss. See <http://www.baileylabovitz.com/jblportfolio/home.htm>. PLUS, we will have a short business meeting following Jackie's program.
- March 7 Chapter Meeting:** "Lichens of Virginia at the University of Richmond Herbarium" presented by Dr. John Hayden and Michelle Ferrell.
- March 16 (Saturday) - The VNPS Winter Workshop** at the University of Richmond. Save the date and plan to register. Our chapter will provide the continental breakfast, coffee, tea and morning refreshments. This will be an opportunity to meet, greet and display our activities to members from other chapters.
- April 4 Chapter Meeting:** Hal Horwitz Wildflowers across America
- May** Watch for the date and place for our annual picnic, and for announcement of the 5th annual Invasive Plant Removal Day.

President's Message: Build from the Old to the New

We have ended a year of changes and accomplishments. New officers served alongside those with long service to plan and carry out field trips, the spring picnic and Christmas party, and most successfully, the annual meeting. See photos elsewhere in this newsletter of our group at the Rice Center and at the Christmas Party.

Most especially, this year will be remembered for the publication of the new Flora of Virginia. We finally have it in our hands - some of us! - after a gap of 250 years since John Clayton's Flora Virginica and after 11 years of work by the authors and editors. There is also a Facebook page for "The Flora of Virginia" as well as another for the Virginia Native Plant Society. Check those out for news of both the Flora and VNPS, and for links to articles in the Richmond Times-Dispatch about the Flora.

Looking ahead to a new year, we have many plans in place. Programs are set through April (see above). Suggestions for field trips are in hand. Some of the natural areas suggested in the Flora may be added, if there's interest in those. We have privet-removal project in conjunction with the Garden and other opportunities to help out there as they let us know about them. The Riverine Chapter of the Virginia Master naturalists has offered volunteers to help with the privet removal in the Garden. There is much to look forward to, BUT, we need more help. We need people to help schedule, plan and lead field trips. We need more new officers to keep the "old hands" from doubling up on chapter tasks. Keep this in mind as you think about your support of the VNPS and Pocahontas Chapter in the coming year. Happy New Year!

Catharine

The following have not picked up their copies of The Flora yet - They will be at the January meeting:

Kristi Orcutt, Stewart Powell, Frances Melton, Andy Wichorek, S. Chamberlin, Andy Pillsbury

Article on Control of Invasives & Richard Gardner's Thoughts

Invasives Removal, Biocontrols and Ecosystems

Catharine Tucker

We heard Matt Leu's discussion of the rapid spread of Japanese stilt grass (*Microstegium vimineum*) at our September meeting and shared our own misadventures with trying to get rid of it in our yards. In October, we listened with dismay to Jim Schroerer's tales of insects, many of which are imports, invading and destroying our forests. In some cases, beetles concentrate on only one species, threatening or destroying populations overlarge areas and disrupting whole ecosystems.

One project we plan for the coming year is removing invasive common privet from the banks of a creek that runs along the east side of Lewis Ginter Botanical Garden. Jay Austin told us at our work day in October that removing privet here is expected to release the native trees and shrubs now growing there. They can then flourish and reproduce. Jay said future plans for this area include planting shade-loving native plants along this creek corridor. This is, of course, a project of the Garden directed by the horticulture staff. We await their scheduling of this work.

As enthusiastic as we are about helping the Garden substitute native plants for less attractive, stubbornly ubiquitous invasive plants, we need to think not just at the species level, but at the ecosystem level on any such project. What will possibly change here besides the plants? What are the components of this creek-side community that we may not see or be aware of? What may take over before the natives have a chance take hold? How will this removal disturb soil and expose it to erosion?

I thought about these ideas after reading the article below from Richard Gardner. He kindly gave permission to reprint his thoughts here. We all appreciate the problems in various areas with *Ailanthus altissima*, the "Tree-of-heaven," or "stink-tree." We should remove the privet as we've discussed. But we should do so with awareness and some follow-up to see if results we hope for actually materialize. I thought of the cautionary phrase, "Be careful what you ask for." Ever the optimist, I think we may be happily surprised!

Thoughts on Ailanthus from a Recent Walk

by Richard Gardner

I was walking yesterday along Blue Marsh Lake, Berks County, PA, looking at *Ailanthus altissima* (Tree of Heaven or Stink-tree) in the area that I focused on for this past summer's research. Without the leaves on the trees, the high grass and the poison ivy, I was able to see dozens of diseased, dying and dead *A. altissima* trees. This confirms that there is a biocontrol system in place that is actively eliminating *A. altissima* from the local ecosystem. In the 1.5 mile return leg of the walk it was hard to find places that had trees not showing disease.

My best guess is the same as I have seen in other places; *Atteva aurea* (Ailanthus webworm moth), *Aculops ailanthii* (an eriophyoid mite) and a pathogenic fungus, probably a *Fusarium* such as *F. oxysporum* (Mimosa wilt), are in a biocontrol system that is taking down and driving to extinction the population of *A. altissima* in this area and other areas I have studied.

This confirms the work of Dr. Mark Schall and Dr. Matt Kasson from Penn State, Dr. Jay Stipes from Virginia Tech, and my own work while at the University of Maryland that *A. altissima* already has effective biocontrols in the local ecosystems across -- at the very least -- Pennsylvania, Delaware, New Jersey, Maryland and Virginia.

The one addition I have made to this in the last 15 months is the understanding of the biocontrol system in place and that it is a **system**, not one organism or several organisms acting independently. This effectively extends the work of each of us, and confirms the original purpose of my MS research demonstrating that we do not need to introduce non-native organisms to control non-natives.

Even though *A. aurea* larvae are narrowly oligophagous (feeds specifically) to *A. altissima* in the Northeastern and Mid-Atlantic States, the adults from recent observations by me and others are generalist nectar feeders which fits into a model for native biocontrols that there is at least one generalist feeding stage in their life cycle. In reality both the larvae and adults are generalists. However, due to the lack of other Simabouracae species in temperate areas of the United States, the larvae are specialist feeders on *A. altissima* in this area. *Aculops ailanthii* is apparently being **phoretically** transported between plants by *A. aurea* and bird species that use *A. altissima* for perches and roosts. The most likely

The Pocahontas Chapter of the Virginia Native Plant Society

serves the counties of: Charles City, Chesterfield, Goochland, Hanover, Henrico, King William, New Kent, Powhatan and the cities of Ashland, Hopewell, Petersburg, and Richmond. It meets the first Thursday of September through April at 7:00 PM in the Education and Library Complex of the Lewis Ginter Botanical Garden, unless otherwise stated.

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scenario is that *A. ailanthii* and, to a lesser degree, *A. aurea* are transporting and transferring pathogenic fungi from infected trees to uninfected ones. *Aculops ailanthii* is probably injecting the pathogen in a way similar to the way mosquitoes transfer disease between hosts. *Atteva aurea* may be doing the same through a more complicated process.

What does this mean? Essentially the same premise that I originally developed in a negative gut reaction to Dr. Hough-Goldstein's research in the introduction of non-native insects to control non-native plants: that is, [that such introduction] is an unnecessary and dangerous practice that is not scientifically justifiable.

Throughout this summer's walks, it became apparent that species such as Multiflora Rose (*Rosa multiflora*), Morrow's bush-honeysuckle (*Lonicera morrowii*), Japanese stiltgrass (*Microstegium vimineum*) and other non-native invasive plants are developing biocontrols from native and/or already indigenous non-native organisms. **The key is that biocontrol is based on systems, not individual organisms.** {emphasis by CWT}

In simple words, there are no magic bullets. To be an effective introduced non-native biocontrol requires the introduction of a non-native biocontrol system. Do we want to introduce a group of non-native organisms with the potential of infinite consequences, or do we want to look deeper into local ecosystems and understand what is really happening.

The biggest lesson I learned this summer is that we need to stop looking for magic bullets and do the footwork that breaks open the understanding of systems. Ecology can only be understood through time in the field over a lifetime. Most of the problems we are trying to solve are not what they appear because Ecology is a complex field with millions of variables. Instead of thinking like our two gerbils, Guinness and Harp, whose short term answers to their perceived problems often cause long term problems, we need to take the time to think deeper and understand the deeper issues before we try to solve them.

The introduction of *Eucryptorrhynchus brandti* [a weevil native to China] to control *Ailanthus altissima* is completely unnecessary and has unpredictable and unforeseeable consequences. This goes along with my belief that there are no safe non-natives, and that we need to stop introducing potential problems to solve problems.

We have made multitudinous mistakes in the past and continue to make them because we are incapable of believing ecosystems are resilient and capable of healing themselves without our continued interference. Instead of being environmental engineers and constantly interfering, we need to be ecologists.

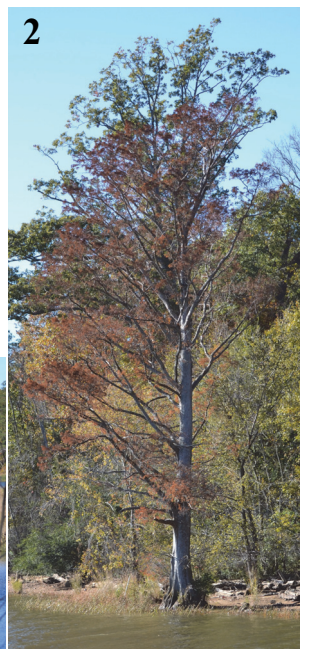
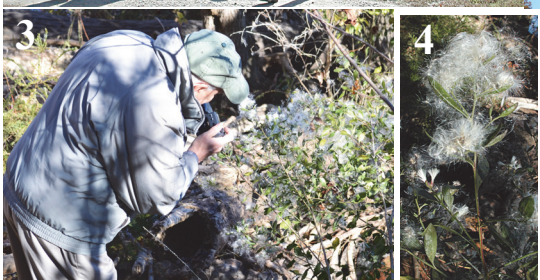
...at the biocontrol conference in New Jersey in February, I challenge the presenters to prove that what they are doing is: 1) safe, 2) ethical, 3) necessary, 4) and that they understand the problems they are trying to solve, and 5) the total consequences of their apparent solutions.

On the other hand, in five photographs I can prove that the introduction of *Eucryptorrhynchus brandti* is totally unnecessary and scientifically unacceptable.

Bad doctrine is bad doctrine regardless of the source, religion or science. The difference is that science eventually rejects bad doctrines and religion does not. With regards to the continuing introduction of non-native organisms regardless of the purportedly good reasons given, I want to see this human-centered practice stopped and a deeper ecosystem approach developed. Otherwise we will continue to do gerbil science, causing more problems than we can solve.

Chapter Events:

Rice Center Field Trip November 8, 2012



1. Our group leaving the Rice Center building. 2. Bald-cypress (*Taxodium distichum*) at river's edge. 3. Photographing Groundsel bush (*Baccharis halimifolia*). 4. Close up of Groundsel bush seeds. 5. Kimages Creek wetland.



Holiday Party - Saturday, December 8th.

We had just about given up hope our copies of the Flora would be delivered in time for the party, but they arrived just in time on Friday afternoon. **Photos:** 1. Owen Brodie plays the pipes to celebrate the Flora's arrival. 2. Catharine, Pat and Daune open up the first copies of the Flora. 3. Enjoying an excellent meal. Many thanks to Suzanne Jenkins for hosting the party.



Rejoice! Spring must be near! The skunk cabbage (*Symplocarpus foetidus*) in Spring Grove, VA is blooming. (Spring Grove is about 20 miles east of Hopewell, VA on Route 10.)

Anyone else have plants showing unusually early blooms?



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