

Rare Plant Forum, Juniata College, Ellis Ballroom. 21 April 2012.

Chaired by Ephraim Zimmerman

Called to order at 9:35 AM by Ephraim Zimmerman. The Rare Plant Forum is the public window into the status of plant conservation to provide guidance to the DCNR in tracking plants in Pennsylvania. This year there is a smaller list of proposals, no big list of *Lemna's* or *Desmodium's*. We also have a number of great speakers, with topics from Bryophytes to limestone plants & also some local work being done here at Juniata College by Norris Muth.

Thanks to Eric Burkhardt from Shavers Creek who led a fantastic hike on the rocks at Martins Gap yesterday. Thanks also to Steve Grund & John Kunsman for putting together many of this year's proposals.

Announcements:

Grund – Wes Knapp couldn't make it today but he sent a short paper by Fernald regarding people correcting epithets of names for Pennsylvania. [The spelling of "pennsylvanica" again. *Rhodora* 43: 556.] The Penn's often spelled their name with one "n". This was not an error. This is a one page article that will be in the back if anyone wants to look it over.

Firestone – if you haven't completed your wild plant management permits for this year, please complete them. If you received a permit last year, you only need to complete the addendum this year. Just to remind folks, it's still \$5.

Zimmerman – the new plant communities of Pennsylvania wetland portion is now live on the natural heritage web site. This work was largely done by the PABS Plant Community Technical Committee. PNHP is still using Fike for terrestrial communities.

Zimmerman – this year in addition to the RPF a number of botanists have gotten together to have a botany symposium like Ohio has done for years. This will be hosted at Powdermill Nature Reserve of Carnegie Museum of Natural History this November 9 & 10. This will be a chance to come together with other plant enthusiasts from across the state. Registration will probably open in July. If we can get sponsorships it will cost less for participants. Ohio is going to an every other year format, so we plan to be holding ours in their off years. Please let us know if you are interested in being a vendor or sponsor.

Introduction of people [everyone around the room introduced themselves]

B. Isaac – In 1973 the US Fish & Wildlife Service passed the Endangered Species Act. They needed sources of information on what plants were rare, so they contacted local botanists to confer with them as to which plants might be in need of protection. Paul Wiegman of the Western Pennsylvania Conservancy was contacted for Pennsylvania. Paul then contacted other botanists in the state to aid in this endeavor. Dr. Wherry was working on the Atlas of the Plants of Pennsylvania at the time & had put together a list of plants known from four or fewer counties as a basis for the rare plant list. Wiegman organized a meeting in Harrisburg on 25 January 1979 to further refine this list & discuss what other

plants might be of conservation concern in Pennsylvania. This was the first annual gathering of botanists that has since been referred to as the Rare Plant Forum. The attendees of this first meeting, the Rare Plant Committee, formed the Pennsylvania Native Plant Society. The Pennsylvania Biological Survey also formed in 1979 and adopted the Rare Plant Committee as the Vascular Plant Technical Committee (VPTC). The VPTC works with the Bureau of Forestry to compile a list of plants of special concern. The Rare Plant Forum is open to the public as a forum for discussion of plants of concern in the commonwealth. The VPTC acknowledges that we do not know everything about all of the plants in Pennsylvania and actively solicits any information that we can gather to aid us in informing the DCNR. The VPTC considers the discussions and recommendations from the Rare Plant Forum and uses this information to advise the DCNR.

Firestone - DCNR update – Ellen Shulzabarger is currently the acting section chief for the BOF section of ecological services. The mission of the BOF is to ensure the long-term health, viability & productivity of the commonwealth's forests & to conserve native wild plants. They are currently working on regulation updates for ginseng & rare plant classifications. Firestone discussed what the eco services section does, including regulation updates, invasive plant management, monitoring gas impact on state forest land, & inventorying state forest lands.

We have over 3100 species of vascular plants in PA, over 2000 are native. These are the species that we are working with. That's a lot of diversity over a large state to work with so we need your help. Over the years the recommendations from RPF & VPTC come to the BOF so you see changes in these classifications that come from these discussions by consensus.

The BOF will not certify any ginseng that leaves the state before September 1 in anticipation of this regulation being changed by that time. For changes see the BOF website at <http://www.dcnr.state.pa.us/forestry/plants/index.htm>.

There have also been personnel changes – Ellen is acting section chief of environmental services but is moving to the section of planning. Kelly Sitch is moving on to monitoring.

Question – Have there been any significant changes with the administrative change in the governor's office? Firestone – there isn't anything significant or any major changes in the DCNR, we have been educating the new administration on what we work on & how we do it.

Burkhardt - who is doing the inventory work? Firestone - Kelly & some others are doing the monitoring. Shultzabarger - because of all the gas stuff we decided that we needed to monitor. This is the first year so we are trying to work our way through it.

PROPOSALS:

***Juniperus communis*** proposal was taken off the agenda because we dealt with it 2 years ago.

***Carex roanensis*** – proposed by Grund. Currently TU proposed PE – was thought to be a local endemic to the Roan Mountain area until recently because it didn't key out well & some of the Carices that should have been in the same group were in a different group. It was often misidentified as *Carex virescens* or

*C. aestivalis*. *Carex roanensis* was first collected decades ago near Ohiopyle. Tyler Smith found this old specimen that had been misidentified & extended the species to PA. He didn't look at Carnegie Specimens. Grund looked at Carnegie & found a specimen from Potter County. We have not relocated the Potter county population. Even with that I doubt that we will find enough populations to get it into the rare category. We have 2 extant occurrences, with 4 or 5 stations. It seems that endangered is a justifiable category for this species. Ebert asked what group it is in. Grund - its in the group with swanii, virescens & aestivalis. It is still in different groups in FNA but Marcia Waterway at McGill plans to put these in a group together. Gleason - have other herbaria been looked at to see if there are *roanensis* specimens there? Grund - I'm guessing that Rob Naczi at NYBG has looked in other places, but I don't know. Shulzabarger - where does the number of extant occurrences come from? Grund - there are many questions on the spreadsheet that is designed to get you to think through whether the known number of extant populations significantly underestimates the real number. So for a species like this, I'm 90% certain that the number is really between 3 & 30, but I think probably it is really between 5 & 10. There is a 50% probability in the middle & 90% between the parentheses. Zimmerman - Steve spent some time putting together the spreadsheet that helps give justification needed to make pretty solid supported decisions. This spreadsheet documents our thought processes to help justify our decisions. Grund - think about if you have to go before the state legislature & propose this. Have I provided enough information to justify this? Zimmerman - all of these proposals have these numbers, in most cases the lower number is what we have known in the database & the other numbers help with the confidence levels. Burkhardt - do we know anything about abundance & range? Grund - I don't. Holt - I think that you made a definite case of retaining UEF because there is a definite need for field work. Ebert - do you ask people to look for TU? Bowen - it does not get the same amount of protection as an E or T. If it looks like we should, we will ask for a survey but it is not as strong of a case to do so. Grund - to address Jacks question, I feel pretty strongly that this is rare enough to get a status in environmental review. I would be really surprised if this would ever get up to rare status. *C. aestivalis* is probably the species people would mistake this for & it is not that common. It might end up at PT, but we only have a few sites. As for environmental review the difference between PE & PT is not that significant. Loree Speedy - what is the window to look for it? Grund - I'm not sure when the perigynia are mature enough to look for it. These hold their perigynia very well & you could probably look for this as late as September. **Goes to PE**

***Euthamia craoliniana*** currently PT proposed PE - John Kunsman - we have two recommendations, the current name is *E. tenuifolia* but it should be *E. caroliniana*, the taxonomy is very complicated, but consensus is that the name should be changed. Currently there is only 1 extant site in PA, with fewer than 100 plants on private property that is very threatened. There is a verbal agreement from the landowner that he would try to protect it but there is nothing solid there. The previously known site from Chester County is no longer there. It is a coastal range species. That is pretty well shot, habitat wise. There is still potential for new successional habitats down there, I think PE is a good fit for this species. It has been PT forever; I think it should be PE. Burkhardt - again what is the overall range? Kunsman - it goes up into Michigan. Cusick - in NW Ohio it is not found often, but the 20 or so populations are usually very large. Hardy - the issue could be what is happening on the coastal plain to the south that is a potential seeding source. Cusick - one of the populations in Ohio has responded

favorably to fire. Grund - a big factor here is the abundance of it nearby may well save this for many decades from becoming extirpated, but we have destroyed most of our coastal plain habitat in PA, that is a factor that might push it towards threatened, but we have clear evidence that this species has declined precipitously in PA. Kunsman - there have never been more than 2 sites in PA, now we only have 1. I was being optimistic on the population estimates. Cusick – it is threatened in Ohio largely due to large size of these populations & many of those populations are protected. Grund - if it's a disturbance species & it winks out at the PA sites it would have potential to decolonize from NJ & DEL.

#### **Goes to PE**

*Juncus trifidus* – proposed by Wes Knapp currently n/a & proposed to PX. Grund - this may not actually be a *Juncus*, it may be closer to *Luzula*. Unlike many *Juncus* species, this is not a wetland species, it is from dryish outcrops. Wes had mentioned that this should be in PA. He found a specimen at the Smithsonian from the Allegheny Mountains in Pennsylvania from 1868. This is a pretty distinctive species; you would probably recognize it as a *Juncus* & would think this is no *Juncus* that I know. This seems that it clearly should be SH so our closest category is PX. Holt - what is the actual flowering time for the species? Grund - I don't have a clue. We are targeting a site in Bedford County to look for it. Hardy - there is not really compelling evidence that it was collected in PA, but the label does read from Pennsylvania. Grund - I would like us to get it on as PX because if we find it, it automatically becomes PE, & it gets protection. I think we are fully justified in listing as PX since label has Pennsylvania on it.

#### **Becomes PX**

*Litospermum canescens* – currently TU, proposed PT, Jessica McPherson & Steve Grund. Grund - This was not an early addition to the list; this was one that fell through the cracks until we systematically looked at all the species that have less than 60 dots in the Atlas. The Technical Committee thought this probably should be tracked. It is a relatively showy conspicuous plant in habitats that botanists frequent. It is a calciphile. It has been 15 years, we've done more work in limestone habitats, we have some more occurrences so we decided that it is time to give it a real status. It is historic in NY & NJ, mostly in the limestone areas of Ridge & Valley in PA. Populations tend to be small, of the 1800 individuals, the majority is at a single occurrence. We have one large site & many small sites. This is well within the guidelines for numbers of individuals. PT is 6-10 sites or 5-10 thousand individuals. It is a habitat specialist & falls in guidelines for individuals for PT. These habitats are prone to invasion by aliens. McPherson - these populations are undergoing succession. Cusick - most sites in eastern OH are gone due to succession & quarrying. Are these populations on areas that might be able to be prescribed burned? McPherson - TNC owns one site. Grund - Grier School is open to management, but not fire. McPherson - I can't say that any of these are open to fire management. Zimmerman - fire is probably more for opening the area up rather than it being fire dependent. McPherson - I don't know the germination requirements either. Firestone - are any of the private lands open or have the potential to be destroyed by quarrying? Grund – There are two things that work in the plants favor, you can't quarry right up to the river and it is often near a river, & they usually don't like to take the outcrop itself because the condition of the limestone is weathered. But they will quarry behind it. Cusick - you still interfere with the water. McPherson - some populations are owned by mining operations & some by farmers. Grund - Hartley Bluffs has a quarry right behind it & some invasives are coming in. They have

now been sold to a limestone quarrying operation. Zimmerman - these comments all work in the favor of the current proposal. Gleason - I think PT is fine but the few times I have seen it, it is more in an old field type habitat rather than on bluffs. Cusick - when you find this, it is usually with other listed species, so anything that protects this species will help other species as well **Goes to PT**

***Muhlenbergia cuspidata*** – current TU, proposed PX, Grund - we went with TU originally because of the distribution. We had questions on its nativity. We didn't know at the time that there was a northern VA population. The Kartesz maps have allowed us to get a better picture of where the species distribution & abundance are in the state. Kartesz has done this one per county for North America. Now we know that this Virginia locality is quite disjunct. It has that nature in the east. It is a habitat specialist on palisade cliffs. The specimen indicates it was from the right kind of habitat. Virginia believes that it is a natural occurrence. Grund - I think it is probably native. The TU question that needed resolved was probably the nativity. It may still be there. I figured that we could get it out of TU. Cusick – in southwestern Ohio the habitat is nearly inaccessible; you would have to be a mountain goat. It is the only extant site in OH. Grund - that may explain why it looks so disjunct. There are undiscovered populations on inaccessible cliffs. Previous collections were from Northampton County. B. Isaac – why not PE? No one has looked. Grund – the S ranks allow for SH for historic or SX if we believe that it is truly gone from the state. This will be an SH not an SX. B. Isaac – I'm good with PX because it will automatically become a PE if found. Grund - my problem with calling PX is we are saying we don't think it is in PA, & we don't think that its not here. We can cover this in the S ranks. Hardy - does this undermine our confidence in these decisions that we haven't gone out to look for this? Grund - hopefully whoever would question the confidence in this would know about the S ranks. Bowers – does a PX status get environmental review? Shulzabarger - we can trigger a hit. Grund - does this trigger at 50 years or from 1950? Shultzabarger - it is supposed to be 50 years. If something else triggers a hit, then this would also be asked to be searched for. Cusick - where are the specimens? Grund – I don't know, I would guess they are at the academy. **Goes to PX**

***Solidago curtissii*** – current PE, proposed DL. B. Isaac - After discussing this species with John Semple at a NYFA Aster & Solidago workshop, I sent the PA specimens to Semple for identification. Semple reidentified all of the Pennsylvania specimens to other species (*S. caesia* & *S. gigantea*) & said that Pennsylvania is too far north for this species. Since *Solidago curtissii* never occurred in PA so we shouldn't track it. Cusick - *S. caesia* is frequently misidentified because it is very variable. **Delist Not in PA**

***Solidago roanensis*** - current PR, proposed PT, Grund. We have gotten more consistent how we treat species. I'm not sure why it went into rare. There aren't many occurrences. I got a note of warning from Chris Frye, from Maryland that specimens identified as *Solidago puberula* sometimes turn out to be *S. roanensis* so there is a possibility that we have more than we know about. We are apparently at the northern end of the range of this species. Cusick – I have looked for *S. roanensis*, & I looked at all specimens at the Carnegie. Grund - Chris Frye is suggesting that some of these dots may be *S. roanensis* on the *S. puberula* map. Cusick – I can comment on I from collecting it in Bedford & Somerset Counties. There is an old specimen from Blue Knob. It must have been a nice place before it was destroyed for recreational purposes. East of Somerset *S. puberula* becomes more prevalent. In Somerset *S. roanensis*

is a gravel roadside plant & flourishes in roadside disturbance. Grund - My experience is the same. I'm not sure if they are mowed. Cusick - I think they come through with a grader & this helps. There are lots in the Mount Davis area & in Preston County WV. The Bedford County sites seem to be destroyed, I can't find them. Kunsman – *S. puberula* is common in the Poconos, I've only seen *S. roanensis* at Mt. Davis. Cusick - the number of rays makes *S. puberula* more showy, & strigillose is a feel. *Roanensis* tends to be a high elevation species. *Puberula* doesn't have a preference for elevation. There is a lot more *puberula* in Franklin, Fulton & Adams Counties than the dots on the map indicate. **Goes to PT**

Afternoon talks:

**Scott Schuette** – State of Bryophytes in Pennsylvania, They're more than just mosses. Schuette discussed the ecological role of bryophytes. They are small plants with short life cycles. They live in various habitats & tend to be pollution sensitive. Bryophytes are not just mosses there are also liverworts, true mosses, Sphagnum & hornworts. About 620 species (inc. var. & subsp.) are known from PA. 465 mosses, 153 liverworts, 3 hornworts (from Atwood). Most mosses & liverworts have fewer than 5 known occurrences. The rarest occur in unique restricted habitats. Email Scott if you want to be on the bryophyte & lichen technical committee.

**Jessica McPherson** - Conservation of limestone communities. The goals of the project were to find out what plants in the PA flora are associated with calcareous habitats. Where are the calcareous habitats? How much natural habitat is left? What are the conservation needs?

**Norris Muth**, professor of biology at Juniata College, *Verticillium albo-atrum* & *Ailanthus* wilt: prospects for Biological control & site restoration.

Extensive *Ailanthus* dieback in south central PA attributed to *Verticillium albo atrum*, PSU140 strain near Tuscarawas State Forest. Work on this being done by Don Davis at Penn State. Only striped maple (*Acer pensylvanicum*) shows limited infection rates in field trails. The trees in an area are usually dead within a year or two. Mode of attack is clogging vascular tissue with fungi.

The Muth lab is working on what happens after tree of heaven dies. Larger areas tend to get more invasives, while smaller areas get more natives. Many of the shrubs may have been there before the treatments. The Muth lab came in after the inoculations from PSU, so there is no pre-inoculation data. Control could be very successful where stems are from a common genet. Restoration will be dependent upon initial site conditions including presence of other invasives. In forests, smaller more irregular *Ailanthus* stands can result in reasonable native tree regeneration.

## ANNOUNCEMENTS

Zimmerman - The DCNR is holding a Bioblitz at Kings Gap on June 2 & 3. Steve Grund is the leader of plants. Scott Schuette will be the leader of bryophytes.

Lary Klotz reminded us of the annual field meeting of the Torrey Botanical Society, the Philadelphia Botanical Club & the Northeast Section of the Botanical Society of America. There will be 3 days of field trips & evening lectures at Slippery Rock University from June 10- 14.

Chris Hardy - Millersville native plants in the landscape conference is on 7-9 June. For information go to:  
<http://www.millersvillenativeplants.org/>

Rocky Gleason – The New York Floral Association holds some very good workshops on plant identification.

B. Isaac announced that the VPTC would meet at 2:30 PM.

Adjourned at 2:23 PM.

Respectfully submitted,

Bonnie Isaac