

PA Biological Survey Steering Committee
<http://www.altoona.psu.edu/pabs/index.html>
Minutes of January 26, 2010 meeting at
PA Topographic & Geologic Survey, Middletown, PA

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MEMBERS IN ATTENDANCE

Angelo Albanese (DCNR intern), Dan Bogar (PA Department of Environmental Protection), Dan Brauning (PA Game Commission), Margaret Brittingham (Ornithological), Jane Earle (Aquatic Arthropods), Kim Van Fleet (Audubon, PA), Jon Gelhaus (Academy of Natural Sciences), Jerry Hassinger (Past President), Bonnie Isaac (Vascular Plants, Carnegie Museum of Natural History), Sally Just (Department of Conservation and Natural Resources), Roger Latham (Continental Conservation), Betsy Leppo (Terrestrial Arthropods / Secretary), Carolyn Mahan (PABS President), Tim Maret (Amphibians and Reptiles), Greg Podniesinski (Community Classification, PA Natural Heritage Program), Kathy Tyson (Terrestrial Arthropods guest), Chris Urban (PA Fish and Boat Commission), Mary Walsh (Mollusks), Lisa Williams (Wildlife Funding), Ephraim Zimmerman (Community Classification)

PABS meeting opened at 8:45 AM by President Carolyn Mahan. Started with committee and government reports. Held off on executive committee reports and voting issues until enough participants arrived to meet quorum.

TECHNICAL COMMITTEE REPORTS

Mammal Technical Committee

Report presented by Carolyn Mahan on behalf of Sandy Whidden and Michael Gannon. See electronic report for details. Fall meeting November 21, 2009. Major topics:

- White-nose syndrome – Request from PGC for data to evaluate the status of tree bats and consider them for listing. Silver-haired, Little Brown, Northern Long-eared, and Eastern Pipistrelle). Primary work this year – reevaluating conservation status of these species and working more closely with PGC. Jon Gelhaus noted that the Philadelphia Inquirer had a front page article on White Nose Syndrome this morning.
- Wind turbines - Status of PGC data, Maryland trial, evaluating consultants, turbine curtailment, incidental take permits. Draft document ‘Standards and Minimum Effort Requirements for Qualified Indiana Bat Surveyor Netting within the Commonwealth of PA’
- Woodrats – potential listing at Federal level
- Matt Lovallo – provided a report on the status of furbearers (bobcat, fisher, and river otter).

Ornithological Technical Committee

Presented by Margaret Brittingham, see full report for details.

- ♦ Species status subcommittee chaired by Doug Gross formed to discuss criteria for listing species. Will incorporate IUCN criteria into their status process. Will use the species status form the committee has used before, but will replace Virginia’s ranking form with the modified IUCN, and use this as a filter for which species to review further. Expect lots of species to fall into the ‘near threatened’ category because of declines, but will still need to rely on best professional judgment. Carolyn - Who is doing the analysis? Margaret – Working in a small subcommittee. Bob Mulvihill (breeding bird atlas project) generated the list. Took atlas data and cut and paste it into an excel file and sorted. The atlas is the preliminary filter used to identify trends. Experts will further evaluate those species showing declines. Are the two years comparable? There was more effort second year, so if a decline was observed between the two years it isn’t effort related.
- ♦ Book ‘Avian Ecology and Conservation’ by Terry Master available from PA Academy of Science.
- ♦ Breeding bird atlas completed, data verified, authors writing species accounts. Dan Brauning: 2nd edition breeding Bird atlas won’t be printed until 2012.
- ♦ Non-breeders of Conservation Concern - subcommittee chaired by Charles Bier – develop a list of rare and declining species for which PA provides critical resources during migration and/or winter.
- ♦ Marcellus Shale Natural Gas Committee – graduate student project to look at effects of well density and spacing on breeding birds.
- ♦ Golden eagles and Wind power – multi state collaborative effort to develop guidelines to minimize effects of wind power
- ♦ Wade Island Colonial Waterbird Update – Terry Master conducted a soil analysis that showed double-crested cormorants acidify soils under trees and may reduce tree survival.

Reptile and Amphibian Technical Committee

Represented Tim Maret, see full report for details.

- ♦ Committee met last fall, updated membership.
- ♦ Reviewed research priorities (hellbender, *Pseudacris*, broadhead skink, rough green snake, spadefoot toad).
- ♦ Conservation concerns: Lily Lake herbicide spraying, Marcellus shale.
- ♦ Box turtle proposed as state reptile. Good opportunity for education and outreach.
- ♦ Timber rattlesnake inventory and assessment update by Chris Urban.
- ♦ Contact Kathy Gipe for volunteering for frog routes for NAAMP Amphibian Monitoring Project.
- ♦ Reviewed state rankings. Two species proposed endangered (PE) in PA: Blue-spotted salamander (recently discovered), and Northern cricket frog (big decline).
- ♦ *PA Fish and Boat Commission website is accepting public comments for listing. Comment period closes February 16. Can read rule & submit comments online.*
- ♦ Extirpated species are not under the 'no take' ruling for F&B. Eastern mud turtle was listed as extirpated but then it was rediscovered in the state. All extirpated species should automatically be on the no-take list (eastern mud turtle, eastern tiger salamander, midland smooth softshell)
- ♦ Subcommittee meeting January 15: Examined listing criteria for reptiles and amphibians. Reptiles, amphibians, fishes, mollusks, are all using modified IUCN listing criteria rather than the past when used expert review only. Need to develop delisting criteria in addition to listing criteria. See discussion under **IUCN Species Listing Process**.

Fishes Technical Committee

Presented by Carolyn Mahan for Rob Criswell, see full report for details.

- ♦ Completed sampling at 84 IBI sites.
- ♦ Documented Rainbow Darter in Potomac River drainage in Bedford County (introduced species).
- ♦ Documented Blacknose Shiner in Allegheny River system, first collection since 1930s.
- ♦ Assisted New York DEC on the Gilt Darter reintroduction. Species was extirpated from NY, PA is providing stock for the reintroduction.
- ♦ Worked with PFBC on proposed species status changes for 5 fish species.
- ♦ *PA Fish and Boat Commission website is accepting public comments for listing. Comment period closes February 16. Can read rule & submit comments online.*
- ♦ Does the downlisting represent species recoveries?
- ♦ Species proposed for downlisting are all from the Ohio Basin in rivers that have been cleaned up, also sampling methods have improved.
- ♦ Using IUCN (same form as the OTC). Slight difference in IUCN modifications. Fish changes under the same ranking proposal as reptiles & amphibians mentioned by Tim Maret. See discussion under **IUCN Species Listing Process**.

Vascular Plant Technical Committee

Represented by Bonnie Isaac, see full report for details.

- ♦ Met last fall and discussed special population proposal, general taxonomic and nomenclature updates to the POSCIP list, species tabled for the VPTC from the annual Rare Plant Forum. Planning next Rare Plant Forum at Wilkes University on April 24.
- ♦ Several members participated in the Floristic Quality Assessment Project, a five state Mid-Atlantic Region collaborative project with EPA Region 3. Finishing floristic quality index this Saturday. How determine rarity? Still need expert opinion, but incorporate # of extant sites, historic sites, how big the populations are. Non-natives are not evaluated because would skew the FQI habitat.
- ♦ Tried the IUCN system but it didn't work as well for plants.
- ♦ The Natural Lands Trust is ranking the mammals, birds, reptiles, amphibians, and fish with a coefficient of conservatism by ecoregion.

Aquatic and Terrestrial Arthropod Technical Committees

Joint report by Jane Earle (aquatics) and Betsy Leppo (terrestrial). See full report for details.

- ♦ Informal meeting of terrestrial and aquatic committees at the ESP meeting October at Lake Raystown, Huntingdon.
- ♦ New Terrestrial Arthropod members: Joseph Reznik from the Powdermill Nature Reserve, springtail (Collembola) expert, and Jack Stabley (amateur ant researcher).
- ♦ Mike Hutchinson is working on a mosquito key for PA.
- ♦ Jane Earle's update to stonefly records was published in January – available in an online-only journal (Illiesia). Will publish all records on the winter stoneflies in same journal. *Citation:* Earle, Jane I. 2009. New state stonefly (Plecoptera) records for Pennsylvania, with additional records and information on rare species. *Illiesia* 5(16):169-181. Available online: <http://www2.pms-lj.si/illiesia/papers/Illiesia05-16.pdf>
- ♦ Ed Masteller and Jerry McWilliams are documenting invertebrates at Presque Isle State Park. Developing a reference collection for the Ridge museum. Should check into getting a report from Ed Masteller and Jerry McWilliams on their work at Erie S.P.
- ♦ Butterfly Count Results: Talk to David Wright about NABA butterfly count results – are these electronic? Where are the current reports?
- ♦ PA Natural Heritage Program is working on a project that evaluates species vulnerability to climate change. Two tiger beetles, two dragonflies, one moth, four butterflies, and one cave amphipod were selected for this evaluation.
- ♦ Frost Museum report from Bob Byers: Posted a job announcement to find someone to care for the odonata collection. Have enough funds to get the position started, but K.C. Kim is looking for additional money. A specimen database (Specify) has already been developed and about half of the specimen data has been entered. The work was being done through a graduate assistantship. Nothing has been done with the database since the student left. Want to get the data entry completed and share the database on the Penn State Website so the public can see what the museum has. The odonate collection (largely compiled by the Beatty's) includes the largest collection of Mexico specimens outside of Mexico. Many type specimens in the collection.

Collecting on State Game Lands

- ♦ PGC Chief Council: Considering revising terrestrial invertebrate collecting guidelines to replace previous guidelines adopted July 7, 2003.

- ♦ The PGC collecting guidelines adopted July 7, 2003 were developed by C.G. VanBuskirk, Jerry Hassinger, Cal DuBrock, Gregory Grabowicz, and Michael Dubaich. See report for details of the existing (2003) guidance letter.
- ♦ PGC contact is Jason Dukosky in Harrisburg. WCO reports go to PGC. Issue just related to collecting terrestrial invertebrates on State Game Lands.

Combining Invertebrate Technical Committees

- ♦ Question raised by Carolyn Mahan. Thinking about issues like making quorum for steering committee meetings, streamlining PABS, representation during votes.
- ♦ Would TATC and AATC members like to be combined or separate? Check with technical committee membership.

Mollusk Technical Committee

Land and Freshwater Snails and Non-unionoid Subcommittees represented by Mary Walsh on behalf of Tim Pearce. Bivalve Subcommittee represented by Mary Walsh. See full report for details.

Land Snail Subcommittee

- ♦ Refining state imperilment ranks for PA Land Snails
- ♦ Land Snail pages for WPC County Inventory Reports
- ♦ Updating distribution maps for PA Land Snails
- ♦ Outreach and Education

Freshwater Snail Subcommittee

- ♦ Refining state imperilment ranks for PA Land Snails

Non-unionid Clam Subcommittee

- ♦ Types specimens of Sphaeriidae found at CMNH.

Bivalve Subcommittee

- ♦ Freshwater mussel surveys in the Middle Susquehanna River Basin in 2009, moving to Lower Susquehanna River Basin in 2010. Genetic analysis, relative abundance, and distribution will be used to assess the status of mussel populations.
- ♦ Mussel surveys in Allegheny river deep pool surveys documented 16 species in 2009, project continues in 2010.
- ♦ Partnership for the Delaware Estuary – surveys of tidal freshwater areas completed, six species documented.
- ♦ Prioritization of mussels for future surveys and monitoring.
- ♦ Ranking process is best professional judgment of state ranks. Worked with Fish & Boat for threatened and endangered listing criteria.

No Technical Committee Report

Bryophyte and Lichen Technical Committee

Proteists and Fungi Technical Committee

Collections and Systematics Technical Committee

Arachnids Technical Committee

AGENCY REPORTS

Department of Conservation and Natural Resources

Office of Conservation Science

Presented by Sally Just, see full report for details.

Climate change adaptation: What activities are underway that address climate change impacts? Working to raise awareness within the agency. Looking for practical strategies.

Invasive Species Management Plan: First created in 2005. Did a survey then to see what the concerns are. Now a cross agency team is going to resurvey and update the plan. Awareness and concern has increased since 2005. Early detection and rapid response are focal points.

State Park Recognition: Pennsylvania won the National Gold Medal for best state parks in the nation.

Marcellus drilling on State Forest Lands

- ♦ DCNR looking for ways to strengthen guidelines for restoration, invasive species control, and monitoring.
- ♦ The Governors office was looking for 60 million from the recent lease sale, but it actually generated 128.5 million.
- ♦ Lease proceeds used to go to Oil and Gas Fund and OCS received a portion of it. This year all of the proceeds were redirected to the general fund.
- ♦ The Governors office is now calling for an additional 180 million in revenue to be generated from state forests. The previous sale involved sites that were of lower quality that occurred near existing drilling projects. To meet this new requirement BOF would have to open higher quality forest tracts. BOF may lose 3rd party certification if it starts impacting larger and better forest parcels.
- ♦ Leases don't currently include language for wildlife. Some water quality monitoring is included, but if wildlife monitoring is not written into leases, the developer will not be held responsible for the costs.
- ♦ Regions of heavy drilling interest include Sproul S.F. (Clinton-Centre), along the W. Branch of the Susquehanna, NW of Lock Haven, Washington and Greene Co.
- ♦ Ken Salazar is trying to recapture extraction funds on a national level (Land and Water funds) to put back into conservation and restoration. Pennsylvania followed this model on a state level until recently, it was an important source of funds for natural resource management.

Department of Energy Eastern Interconnect: US DOE will be working with PA to review environmental impacts of possible major transmission line routes. All of the additional smaller off-shoots would be handled on a local scale.

New GIS intern: Introduced Angelo Albanese, a new intern at DCNR. He attends Slippery Rock University student and works with GIS, ArcSequel, etc.

Bureau of Forestry – Wild Plant Program

Presented by Carolyn Mahan for Chris Firestone, see full report for details.

- ♦ Focus in recent months has been working with the ecological services section to develop best management practices and monitoring protocols for gas development on State Forest lands.
- ♦ Re-convened the Invasive Species Coordinators to address invasive plants on State Forest Lands. Assisting with update of DCNR's Invasive Species Management Plan.
- ♦ Participating in partnership to identify and treat Pumpkin Ash (PA endangered species) against the Emerald Ash Borer.
- ♦ Update regulations and revision of Ginseng program.

Department of Environmental Protection

Represented by Dan Bogar, see full report for details.

- ♦ Dunkard Creek fish kill – in part a result of a bloom of golden algae exacerbated by high levels of TDS in the water from acid mine drainage.
- ♦ Ramped up disinfection protection for all gear and equipment to prevent spread of golden algae in the region.
- ♦ Evidence of zebra mussels reproducing in the area of the Peach Bottom Power Plant in lower Susquehanna River.

Pennsylvania Fish and Boat Commission

Presented by Chris Urban, see full report for details.

Threatened and Endangered Species listings/delistings: Applied IUCN listing criteria in 2009. Held off on listings for 5 years while cleaning up the list and preparing listings. Now actively listing/delisting. Mussels were previously worked up, now fish and herptile proposed changes are open for review. Comment period open on new changes until February 16, can log on to website to comment.

Grants: Finalized grants for nine different State Wildlife Grant (SWG) projects, and an additional five grants pending. No competitive projects awarded in the 2009 SWG cycle. Hoping there will be a call for the 2010 SWG cycle. Match requirement is dropping a little bit and F&B got a little more money.

Activities:

- ♦ Timber Rattlesnake Population Study

- ♦ Management/recovery plans for eastern spadefoot, eastern pearlshell, and eastern massasauga.
- ♦ PFBC is looking at monitoring water quality at approx. 300 Marcellus sites.
- ♦ Dunkard Creek damage assessment of dead fish, mussels, and mud puppies.
- ♦ Carter's Dam Removal – Water levels for about 3 miles upstream of dam were exposed. Moved over 10,000 mussels stranded as water levels dropped. Will conduct long term monitoring for the next 10 years. Will see how mussel fauna changes in the impact area and in the relocation site.
- ♦ PFBC is hosting the next American Fisheries meeting in September.
- ♦ Participating in Governor's Invasive Species Council
- ♦ Invertebrate Biologist position – Not advertised yet, looking for match. Hope to post soon.

Pennsylvania Game Commission – Wildlife Diversity Program

Presented by Dan Brauning, see full report for details.

- ♦ Wildlife populations: Bald Eagles, Peregrine Falcons, Breeding Bird Atlas, Mineland bird, Barn Owl, White-nose Syndrome, Allegheny Woodrat, Northern Flying Squirrel, Wildlife Action Plan
- ♦ Habitat Management: updates on Consol energy property and proposed beltline project, Private Landowner Assistance Program (91 plans written for 11,441 acres), CRCS/WHIP projects, prescribed burns, LIP conservation easements, SWG projects.
- ♦ Outreach: White Nose Syndrome, PA eBird website, Wade Island heron rookery, endangered bird species recovery, Cook Forest State Park bird list, breeding bird summary 'Birds of Note, county reports for 'Pennsylvania Birds' journal, new book on birds of central PA, Regional Wildlife Diversity Biologist presentations.
- ♦ Overhaul of PA endangered/threatened bird and mammal pages on the PGC website.
- ♦ Do anticipate SWG grant funds this year. Probably about like 2 years ago. Focus on implementation.

White Nose Syndrome update

Update provided by Lisa Williams

- ♦ Found from NY to Virginia. Fungus has been ID'd and typed. Known from Europe for 25 years but Europe doesn't have the mortality we do. PA is participating in field trials but not seeing good results.
- ♦ NY: Most species at 97-100% mortality. Not sure if there is survival or just lack of exposure. Once a cave gets exposed, doesn't recover. Bats reproduce at 1 pup per year. Number of counties tripled from last year, and still early in the season. Usually don't see die offs until February-March.
- ♦ Any natural immunity or resistance?
- ♦ No, it's a surface fungus (like athletes foot). You get it once, you can get it again.
- ♦ The majority of caves in PA are privately owned.

PA Natural Heritage Program

Presented by Greg Podniesinski, see full report for details. Project highlights:

- ♦ EPA Wetland Program Development Grant to monitor high elevation wetlands that may be susceptible to climate change
- ♦ Climate Change Vulnerability Index to evaluate species vulnerability
- ♦ EO Updates – Developing strategies for updating older records (over ten years old) in the PNDI database
- ♦ Middle Susquehanna and Allegheny pools mussel surveys
- ♦ Study of plant communities of wet thickets and the bird species that use them, with a focus on State Wildlife Action Plan priority species.
- ♦ National Park Service - Collaborative effort to monitor plant community structure and composition over time at Delaware Water Gap, Fort Necessity, Friendship Hill, Gettysburg, Bluestone National Scenic River, and Pipestem State Park.
- ♦ State Parks - Conducting species and natural community inventories, developing management recommendations, and working with parks to find ways to incorporate information into state park management plans. Active parks are Ricketts Glen, Blue Knob, Ohiopyle, Bald Eagle, Canoe Creek, and Kettle Creek
- ♦ County Natural Heritage Inventories – wrapping up the last of the counties that have not had at least a preliminary survey. Ten active counties: Armstrong, Butler, Cameron, Delaware, Erie, Indiana, Jefferson, Pike, Venango, Warren, and Bedford (temporarily on hold).

Department of Agriculture

No representative, no report

MEMBER-AT-LARGE REPORTS

Academy of Natural Sciences

Presented by Jon Gelhaus. See full report for details.

- ♦ Visit the Academy’s website for information on research, collections, and data access at <http://www.ansp.org>
- ♦ Looking for a new president to replace President and CEO William Y. Brown who is leaving to head up the Woods Hole Policy and Research Center.
- ♦ Outreach and Education: Established a Center for Environmental Policy (www.ansp.org/environmental) which evaluates key issues of environmental policy, facilitates dialogues and decision-making on environmental topics, and informs the public from both an academic and practical perspective; Education department offers classes and programs (<http://www.ansp.org/education/index.php>); Bug fest in August; Art in Science exhibits (<http://www.ansp.org/museum/art-in-science.php>); Exhibit that celebrated the 150th anniversary of the founding of the American Entomological Society
- ♦ Biodiversity surveys: Diatoms; Susquehanna River phycology study; Eels in Delaware River drainage; Catfish of Delaware River estuary; Environmental biogeochemistry studies; Patrick Center genetic study of bridle shiner population structure (http://www.ansp.org/research/opportunities/reu_projects_2008.php#shiner); Restoring extirpated freshwater mussels to the Brandywine River; On-line interactive key of 21 species of turfgrass craneflies; Pollination of Indian Hemp and Common Milkweed; Vegetation survey of coastal plain forest in Delhaas Woods

- ♦ New Hires: Dr. Marina Potapova, Director of Diatoms; Clare Flemming, Archivist for the Academy Library; Dr. Jerry Mead, Asst. Scientist of Watershed and Systems Ecology; Steve Dilliplane, Biodiversity Database Programmer, to expand online databases
- ♦ Biodiversity Information Access and Voucher Collections: Board approved a revised ‘Collection Policies of the Systematic Biology Collections’ at ANS.
- ♦ See data currently online at http://www.ansp.org/research/biodiv/collection_db.php). Current database work includes; Databasing of rare and invasive plant species; A 60 year survey of multi-taxon aquatic environmental surveys (<http://streamsurvey.ansp.org/>) which includes long term surveys; collection data for Primary Type specimens of the Entomology Dept. (<http://clade.ansp.org/entomology/>); Peale Butterfly and Moth collection (<http://clade.ansp.org/entomology/collections/peale/index.html>).

Audubon Pennsylvania

Presented by Kim Van Fleet, see full report for details.

- ♦ Update on the Atlantic Flyway Forest Initiative
- ♦ Mapping of statewide energy sprawl – Collaborating with TNC and WPC to map new energy infrastructure including industrial scale wind turbines, Marcellus Shale gas wells, and new and existing electric transmission lines and pipelines. Everything ground-truthed. Older shallow wells not included.
- ♦ Site work: Middlecreek WMA, Quakertown Swamp, Waggoner’s Gap, Kiwanis Lake, Presque Isle State Park, Mt. Zion Piney Tract
- ♦ Report on bird window building collision study in Philadelphia

Box Scores

- ♦ Give updates to Roger Latham. Carolyn will set a box score update deadline.

Hawk Mountain Sanctuary

Full report provided here courtesy of Laurie Goodrich:

- ♦ Hawk Mountain’s 17 full-time staff assisted by visiting scientists, volunteers, and interns, have been busy pursuing programs in education, conservation science, and public outreach. New education programs include *Raptor Challenge* which brings raptor biology into center city schools in eastern Pennsylvania. In 2009 we celebrated our 75 years of raptor conservation, and saw the publication of the first biography of Rosalie Edge, a Pennsylvania conservationist and founder of Hawk Mountain (HMS).
- ♦ Information on all HMS programs can be found on the Hawk Mountain website along with pdfs of scientific publications, educational materials and scientific conservation status reports on North American raptors, etc.
- ♦ Trends in migrant raptors at eastern watch-sites (by species) including Hawk Mountain and Waggoner’s Gap can be found at www.rpi-project.org.
- ♦ In autumn 2009, HMS counters recorded 15,561 raptors, lower than the 10-year average of 18,421. The largest dip was seen for late season migrants such as Red-tailed Hawk, Red-shouldered Hawk, Northern Goshawk, and Golden Eagle, 52%, 42%, 59%, and 37% below average. A new season record was set for Peregrine Falcon, 68. We also recorded over 77,000 other migrant birds including 3786 Blue Jays, 5377 Red-winged Blackbirds, 439

Ruby-throated Hummingbirds, 698 Black-throated Green Warblers. Only 447 Monarch butterflies were counted for one of the lowest years on record.

State Wildlife Funding

Presented by Lisa Williams, see full report for details.

- ♦ State Wildlife Grants: Provided an update on funding prospects and challenges for next year's funding, and the current situation in Congress. State Wildlife Action plan needs revised in 2015. A nice kick-off will be the PA TWC meeting next year. Will alter the species list as needed, with a focus on responsibility migrants. Will look more at assigning and prioritizing threats.
- ♦ Climate Change Legislation: National movement to implement climate change into action plans. PA's Climate Change Impact Assessment and Action Plan are now complete (collaborated with Penn State). PGC and PFBC submitted an amendment relating to climate change for the current SWG Wildlife Action Plan. The amendment re-affirms that PA responsibility species are our focus. Hope to position ourselves for federal climate change funding.
- ♦ Teaming with Wildlife Fly-In: Will be held February 23 this year. Participation and/or messages of support are requested. End of February good time to write to Congress to support SWG. Phone calls are best, followed by letters, then faxes and emails.
- ♦ Carolyn: Brought in an article mentioned in The Philadelphia Inquirer January 11, 2010. States need to focus on responsibility species and not just species that are considered endangered in the state. Article PloS One.

Western Pennsylvania Conservancy

Oral report by Ephraim Zimmerman on behalf of Charles Bier.

- ♦ Update on Land Protection efforts at WPC
- ♦ 2400 acres in Clearfield Co. to the Conservation Fund for sustainable forestry
- ♦ Revolving land fund for smaller land trusts who need quick turn around assistance to purchase land. Allow conservation of smaller properties in rapid fashion.
- ♦ Two properties protected in French Creek Watershed – about 180 acres total.

Wild Resource Conservation Program

Represented by Sally Just for Greg Czarnecki. See full report for details.

- ♦ WRCP Grants 2009: For several years 1.2 million was the usual grant pot from Environmental Stewardship Fund (Growing Greener). This year 1/3 of that was available due to the economy and budget cuts. Only able to fund three projects to the Western Pennsylvania Conservancy to support work by the PA Natural Heritage Program. Funded Conservation of Plant Species, County Natural Heritage Inventories, and Assessing the Impacts of Climate Change on Vulnerable Species and Habitats.
- ♦ Future funding: The Environmental Stewardship is bottoming out next year and Growing Greener will be gone by 2012 unless there is new legislation.

- ♦ Keystone Wild!Notes: To cut costs, all writing, editing, and graphics lay-out will be in-house. Jessica Sprajcar is the new in-house editor. Still no budget to print, so will continue to be available online only.
- ♦ WRCP Festival and Conference: Did not have a wildlife festival in 2009 because of limited funding. In 2010 will combine the festival with a symposium on climate change at the Tom Ridge Center. Friday April 30th climate change symposium, May 1st festival.
- ♦ A Pocket Guide to Pennsylvania Snakes – Worked with the State Museum to produce this small natural history guide. Proceeds go to WRCP. Working on an amphibian pocket guide.
- ♦ Checklist of Pennsylvania Mosses: The Missouri Botanical Garden published the moss checklist. Funded in part by WRCP. 443 moss species and varieties in the state. Contact Greg Czarnecki for copies.
- ♦ Support WRCP: Looking for creative ways to generate revenue for WRCP, which doesn't receive any operational / general funds. A new easy way to support WRCP every time search the web. Use www.isearchigive.com as a search engine - WRCP will receive 0.02 for every search. When shop online at participating retailers, a portion of purchase price is donated to WRCP.

No Member-at-Large Report

*Carnegie Museum of Natural History
The Nature Conservancy*

STANDING COMMITTEE REPORTS (non-voting)

Community Classification Standing Committee

Represented by Ephraim Zimmerman, see full report for details.

- ♦ Met in Middletown January 22nd.
- ♦ This standing committee is turning community classification into more of a peer reviewed collaborative effort with scientists like Ann Rhoads, Roger Latham, etc.
- ♦ Working on assigning conservation status to communities.
- ♦ Developing fact sheets for plant communities. Working with Nathan Dewar to make the fact sheets available on the web.
- ♦ Updating wetland plant communities with grants from US EPA and DEP. DEP will use conservation ranks to assign exceptional and high quality status to S1 through S3 wetland communities.
- ♦ Paul Roth (Bureau of Forestry Inventory and Analysis Section) presented on long-term forest monitoring plots.
- ♦ Did the committee look at what the NE states did? Ecological systems coarse scale.
- ♦ Yes, are connected to that project through NatureServe.

Climate Change Adaptation Standing Committee

Greg Czarnecki – no report

Environmental Education

No representative - no report

SPECIAL REPORTS

PFBC and PGC - Memorandum of Understanding

Discussion led by Carolyn Mahan

- ♦ Agency MOUs with steering committees, should they be reauthorized?
- ♦ PGC has a data confidentiality agreement with the Wind Energy. Now PGC can't give data to the Mammal Technical Committee (MTC). Carolyn would like to see if the MOU can give the MTC access to the PGC wind energy monitoring data to help with listings.
- ♦ Should MOUs be reevaluated, or should they be left alone? PFBC MOU is only a few years old. PGC MOU is much older, maybe 15 years old.

Penn State Collections

Discussion led by Carolyn Mahan

- ♦ K.C. Kim and Carolyn Mahan will meet with the administration at Penn State to talk about the importance of the collections. Grant not received for the vertebrates, not sure about the plants. Have legal obligations to curate specimens from certain agencies like NPS, etc.
- ♦ Jon Gelhaus: If need support from other museums, let him know.
- ♦ Isn't a land grant institution required under the charter to maintain their collections?
- ♦ Warehousing specimens without providing access to researchers is no good.
- ♦ Carolyn may call upon Margaret Brittingham to help with this meeting as well.

PA Wind and Wildlife Collaborative (PWWC)

Betsy Leppo attended the August 26, 2009 collaborative meeting. See report for details.

- ♦ The Western PA Conservancy (WPC) received a grant through Audubon to develop Best Management Practices (BMPs) for use by the PWWC. Terrestrial invertebrates and forest fragmentation were identified as needing BMPs to supplement recommendations provided by regulatory agencies (DCNR, PGC, PFBC, USFWS, DEP). The PABS Mammal Tech Committee submitted BMPs for birds & bats.
- ♦ The BMPs WPC developed contained recommendations for wind energy site selection, mitigation, site construction and operation. After several rounds of working with PWWC to review, edit, and restructure the recommendations, full length BMPs and summary 'short lists' were submitted in July of 2007.
- ♦ In subsequent meetings, the PWWC determined that these BMPs were too far reaching. In order to keep the BMP effort from completely dissolving, the PA Game Commission (PGC) initiated a further BMP review and negotiation process with wind energy representatives on July 22, 2009. They developed BMPs focused on (but not limited to) PGC species that would become a part of the PGC wind energy voluntary cooperative agreement. These BMPs provide recommendations for construction and operation of wind farms in PA. Siting of developments on non-PGC sites was removed from the discussion. PGC does have site selection criteria for potential wind energy development on game lands. The existing PGC voluntary agreement also contains pre- and post- monitoring requirements for bats and birds

<http://www.pgc.state.pa.us/pgc/lib/pgc/wildlife/pgcannualreport.pdf>).

- ♦ The PWWC science committee reviewed the PGC-wind industry construction and operation BMPs on August 24, 2009. The science committee recommendations were in turn reviewed at this PWWC meeting on August 26 and largely accepted. Since PGC expressed willingness to protect species not under their jurisdiction, the science committee inserted several recommendations from the invertebrate and forest fragmentation BMPs. The collaborative requested clarification on recommendations for forest fragmentation and disturbance of seasonally wet areas. The science committee remains concerned about the depth of coverage for non-PGC species and the lack of siting guidance. One suggestion was to post all original BMPs on the PWWC website so that full recommendations can be viewed publicly and easily shared with other states, industries, etc.
- ♦ PGC is still accepting comments from the collaborative regarding the science committee's recommendations on the construction and operation BMPs. PGC will address remaining concerns and resubmit the BMPs for final review by the PWWC.
- ♦ There was some discussion of whether or not other agencies like PFBC should develop voluntary agreements like PGC did.
- ♦ Down the road, leadership of the PWWC may transfer to the Department of Environmental Protection. DEP is planning to restructure their organization to better address energy development in the state, including wind energy. The full BMPs submitted by WPC and PABS technical committees could be a good starting point for recommendations and regulations for a whole suite of development activities in the state, beyond just wind energy.

PA TWS conference

Discussion led by Carolyn Mahan

- ♦ Would like to have another status workshop/meeting to talk about the status of PA wildlife, and the PA Wildlife Action Plan. Workshop at PA TWS meeting. Highlight Lisa Williams's work. Discuss environmental threats with a focus on solutions. Reach out to industry and government.
- ♦ Should coincide with the Johns Hopkins book coming out – Merritt, Steele, Brittingham, Maret editors of "Terrestrial Vertebrates of Pennsylvania: A Complete Guide to Species of Conservation Concern". Lots of the contributors from PABS. Passed around the letter. This should be printed by December hopefully.
- ♦ Good timing to get word out that the State Wildlife Action Plan needs updated by 2015.
- ♦ This workshop should take place on Saturday of the conference and be the focus of the meeting. Friday- workshops useful to the students. Even outside of Marcellus Shale, there is lots of survey and consulting work to inform students about. Focus on what sort of knowledge and skills are needed to help protect biodiversity in the state.
- ♦ The conference has been held in State College for the last three years, they get significantly higher attendance that way. In the past the conference location used to move around the state.
- ♦ Mammal TC should not have their meeting at the same time, it takes away from the meeting attendance
- ♦ No objections from the PABS committee, Carolyn will move forward with this.

Marcellus Shale Workshop

- ♦ Workshop in conjunction with the PA TWS, March 19, 2010, State College, PA. Contact Aura Stauffer (astauffer@state.pa.us) for more information.

Marcellus Shale Position Letter

Discussion led by Carolyn Mahan

- ♦ PA is the only state without a gas severance tax. These funds could provide money to agencies and local governments to support environmental services. We need to allocate funding to research environmental impacts and develop conservation measures.
- ♦ We did already write a PABS position statement regarding Marcellus shale (June 10, 2009). This letter opposed funneling the oil and gas lease sale proceeds into the general fund and away from environmental programs.

Ski-slopes –site management study

Mahan: Saw a paper on the effects of clearing versus grading on ski slopes. Clearing is not the same as grading. Study found that site prep with bulldozing to grade the slopes completely alters the soils and their microbial community, making it harder for a site to recover. Published in Ecological Applications last week.

Wildlife Funding – Special Analysis

Discussion led by Jerry Hassinger

- ♦ See the wildlife funding editorial from John Hayes dated January 17, 2010.
- ♦ See the handout ‘5 year projection of example project costs for bird and mammal conservation, recreation, and education’.
- ♦ In order to position for funding, should prepare a needs analysis for a 5 year window. \$1 million a year is proposed in the current house bill but it is not nearly enough. PGC and PFBC and probably even DCNR need a reliable funding source from somewhere. Before a state funding mechanism can get off the ground, need to know ‘how much does it cost’. Assign a dollar amount to effort needed. Legislators and policy makers are the audience. Research can fall under any of the main three categories (conservation, recreation, education).
- ♦ A cost analysis would help Teaming for Wildlife to respond to requests as bills are being developed in Washington. Need to identify finer goals and put people/dollar amounts to it.
- ♦ PNHP program did a needs analysis in the ‘EO updates project’, but did not assign costs
- ♦ What is the status of the conservation plan developed under Sue Thompson’s leadership?

IUCN Species Listing Process

Discussion led by Tim Maret

- ♦ See handouts ‘Red List Guidelines Table 2.1’ and ‘Special Concern Species Status Documentation Form’ developed by the Mammal Technical Committee (and used by the Ornithological T.C. as well).
- ♦ Currently PA uses IUCN Critically Endangered category for PA Endangered, and IUCN Endangered for PA Threatened. But a better strategy may be to follow the lead of Canada.

We would equate IUCN Endangered plus Critically Endangered species with PA Endangered species, and IUCN Vulnerable species with PA Threatened (see table).

Canada (current)	IUCN Endangered	=	Canada Endangered	IUCN Vulnerable	=	Canada Threatened
Florida (current)	Federally Endangered	=	Florida Endangered	IUCN Vulnerable	=	Florida Threatened
Pennsylvania (current)	IUCN Critically Endangered	=	Pennsylvania Endangered	IUCN Endangered	=	Pennsylvania Threatened
Pennsylvania (proposed)	IUCN Endangered & Critically Endangered	=	Pennsylvania Endangered	IUCN Vulnerable	=	Pennsylvania Threatened

- ♦ Regional guidelines are available to accommodate responsibility species. Also can develop adjustments to reduce level of protection when desired, for example for peripheral populations in PA that are doing well elsewhere.
- ♦ Plant TC: Just don't know enough about enough of our species to be able to use the IUCN criteria. Northcentral PA is a classic example. Few rare species but because of lack of info.
- ♦ The Fish TC had trouble with the IUCN criteria because fish populations are linear not aerial features.
- ♦ For the PGC, legal requirement for listing is distribution within the state. But PABS is concerned about the species range outside of the state as well. PABS may have one recommendation for a species, and the jurisdictional agency may give a different recommendation under their regulations.
- ♦ See Criteria A: What if have a species declining over the past 10 years. Then you take some measures and it stops declining, but it doesn't recover. After 10 years of maintaining or moderate decreases, do you have to delist it because it didn't keep declining at a precipitous rate? According to the IUCN criteria it wouldn't fit the listing criteria anymore if stable over 10 year period. Need delisting criteria that says it needs to have recovered or increased by X amount.
- ♦ Hellbender does not meet criteria B,C,D, or E but there is not enough data to support the expert opinion that it fits A1.
- ♦ What if species increased range (double or tripled over the past 25 years), but really there aren't any delisting criteria.
- ♦ Could add a couple paragraphs that suggest what recovery would look like, broad guidelines. How many breeding pairs over what area for how long?
- ♦ Federal T&E species get recovery plans written. Goals are set for the species. Once the species meets the goals then the species is considered recovered.
- ♦ Plants: Have regulations they must follow, have to go through the Pennsylvania Legislature. The Biological Survey has a bunch of instructions.
- ♦ Responsibility species: Common species where PA has 90% of the population. Example wood turtles. Not an endangered species, but PA is the stronghold.
- ♦ SWG species of greatest concern: This list is used to prioritize research, but not regulatory.
- ♦ PGC – expended quite a bit of effort on Cerulean Warblers. Responsibility versus endangerment. Combination of high responsibility but not high abundance (the extreme of this is endemic species) gets the highest protection.

- ♦ Drilling is taking place on State Forest and State Game Lands and can also take place on State Parks. We don't own mineral rights under 80% of state park lands. No drilling allowed in Natural Areas. But no legal protection for Important Bird, Mammal, and Herptile areas.
- ♦ IUCN is a component of the listing process, not the final word.
- ♦ Florida's experience with IUCN was that it failed to catch species they felt should be listed. Ex: Manatee did not come out as endangered using IUCN. Adopted a process similar to the Virginia ranking system.
- ♦ PA used a modification of Florida's older (2005) adaptation of IUCN. Bird committee used Jerry's IUCN adapted numbers.
- ♦ Birds: Focused on Criteria A, flying migrating birds, couldn't use B, C, D, E.
- ♦ Fish, Herptiles, and Mussels – not enough data for C, D, E. Focused on A and B.

OFFICERS' REPORTS

Executive committee reports delivered after enough members were present for quorum.

Approval of the August 10, 2009 Steering Committee Minutes

Carolyn distributed the minutes from the last PABS meeting on August 10, 2009. Bonnie Isaac moved to accept the minutes from the last PABS steering committee meeting with the changes mentioned. Dan Bogar seconded. Motion approved.

Treasurer's Report

Presented by Carolyn Mahan for Greg Czarnecki (see electronic report).

- ♦ Deposit of August 12 of \$13,500 from PA Game Commission for Windows on the Wild copies.
- ♦ As of 12/31/2009: Total balance \$17,963.80. Of that, \$14,551.49 is in the PABS sub-account and \$3,412.31 is in the Ornithology Technical Committee sub-account.

President's Report

Presented by PABS President Carolyn Mahan.

Past president meeting

Carolyn met with past presidents (Jerry Hassinger, K.C. Kim, Frank Felbaum, etc.). We discussed the need for money for core PABS support, especially at the upper level. K.C. Kim used to have institutional support through Penn State for his time and printing materials and conferences.

Constitution and By-Laws

- ♦ Steering committee: PABS was almost 50% state and federal agencies. PABS is designed to advise these agencies so we can't be overly represented by them.
- ♦ Wild Plant Program should be lumped under DCNR so that DCNR has 1 vote only.
- ♦ Have 1 Member at Large position still open – solicited recommendations. September, USFWS, Chesapeake Bay, Army Corps?

Current Quorum of the PABS

- ♦ **Quorum = 17.** Definition of quorum = 1 more than $\frac{1}{2}$ of the steering committee. The three standing committees are non-voting. Therefore $\frac{1}{2}$ of (36-3) = 16.5. Round up to 17.

Officers Meeting Monday May 10?

- ♦ Discuss the 'needs assessment' further
- ♦ Rank assessment – OTC and MTC should have met by then, may have a revised draft listing form for mammals
- ♦ Invert subcommittees
- ♦ Deposit for the Windows on the Wild

NEXT MEETING

Tuesday August 17 at Stackhouse. Gather at 8:30 and meeting starts promptly at 9:00.

Meeting concluded: Roger Latham moved to close the meeting at 3:30 PM. Margaret Brittingham seconded. Motion moved.

Stonefly. Stoneflies (Plecoptera) are a small order of hemimetabolous insects with about 3500 described extant species in 16 families and 286 genera (Fochetti and Tierno de Figueroa, 2008). From: Biodiversity of Pantepui, 2019. Related terms Nymphs have been recorded from the Auyáitupui and Akopáitupui plateaus (Table 8.2); new records were published from the foothills of Roraima-tepui and Kukenáitupui (Derka and Tierno de Figueroa, 2016). Table 8.2. Review of Plecoptera taxa from Pantepui. New records for the stonefly fauna (Insecta: Plecoptera) of Kosovo. *Amphinemura sulcicollis* (Stephens, 1836). We contribute new information on the taxonomy and biology of two recently described Balkan endemic stonefly species of the genus *Isoperla* Banks, 1906 (Plecoptera: Perlodidae). The hitherto unknown larva of *Isoperla pesici* Murányi, 2011 can be distinguished from related species on the basis of more laterally positioned abdominal stripes, and the long hairs on the apical half of the cerci. Additional significant new country records are provided for *Amphinemura triangularis* (Ris, 1902), *A. quadrangularis* Zwick, 1978, *Nemoura caligula* Zwick, 1978 and *Leuctra jahorinensis* Kačanski, 1972. View. The Plecoptera Species File (PSF) aggregates stonefly nomenclature, distribution, and literature to help society and scientists understand the value of services stoneflies provide. Using PSF data, we examined global and regional diversity, compared species description rates, and predicted future species description numbers through the year 2100. Through 2018, extant species totaled 3718 with Temperate Asia having the greatest regional diversity at 1178 species. Ecosystem Services, Global Diversity, and Rate of Stonefly Species Descriptions (Insecta: Plecoptera). by. R. Edward DeWalt. Predict the number of new species described globally and for two fast-growing regions for the years 2050 and 2100. 2. Ecosystem Services Provided by Plecoptera.