



# NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

## August 23<sup>rd</sup>: Day One

---

### Welcome Messages

#### **Meeting Host** - Holly Niederriter (Delaware Division of Fish & Wildlife)

Welcomes attendees and gives rundown of agenda and activities. Announcement of a Silent Auction, the proceeds will be used to reduce registration fees for students to attend future NEPARC meetings.

#### **NEPARC Co-Chairs** - Scott Smith (MD-DNR) & Linda Weir (USGS)

- Overview of NEPARC
- Scott recommends formation of a NEPARC steering committee
- Listing of past projects that are completed (see updates section for more info):
  - Model Regulatory Guidelines for States
  - NEPARC Website and Listserv
  - List of Herpetofauna for Northeast states
  - Risk Assessment Project
  - Northeast Priority List

#### **National PARC News** – Presentation by Ernie Garcia (PARC Federal Agencies Coordinator) & Priya Nanjappa (PARC State Agencies Coordinator)

- Roles are to act as liaisons between National PARC and regions
- Will help to connect herp conservationists to resources
- Working on the Habitat Management Guideline publications for the various regions. Status of HMG for regions:
  - Southeast: coming out October 2005
  - Midwest: revised version coming out 2006
  - Southwest: in final review
  - Northwest: in progress with hopes for completion in spring 2006
  - Northeast: going to press in November 2005
- Hope to have HMGs available on the web
- Working on Inventory and Monitoring Handbook and Training (US Forest Service funded development)
  - Peer recommended protocols for inventorying and monitoring for every US herpetofaunal species
  - Southeast draft by 12/2005
  - PARC looking for funds to publish
  - Pilot workshop given to 35 participants in November, 2004
  - Training given rave reviews
  - US Forest Service has agreed to fund the next training module
- Funding for PARC
  - \$276,800 in federal funds received so far, including those for HMGs, Federal Agencies Coordinator salary, and other PARC activities
  - 26 States have given money towards PARC or HMGs so far (9 of these states are in the Northeast)



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- PARC should be able to solicit additional funds (from product receipts, Corporate Sponsors, or voluntary donations) to pay for staff, infrastructural development, publications/products, on-the-ground conservation implementation
- PARC received \$36,500 in year-end federal funding from US Forest Service for: infrastructure, I&M Handbooks and Training, HMGs, federal herpetofaunal data compatibility workshop, SSAR Urban Herpetology Volume
- Upcoming meetings
  - Joint National Steering Committee- September 28, 2005
  - Federal Agency Steering Committee- September 29, 2005 (morning)
  - PARC Symposium September 29, 2005 (afternoon)
    - Note: the above meetings are being held in Madison, Wisconsin in conjunction with The Wildlife Society's Annual Conference
  - PARC Alignment Workshop – late Fall 2005 (NOTE: date has been changed to January 2006)
- Some goals for PARC:
  - Request annual deliverables (progress reports etc.)
  - Increase National PARC participation in regions and vice-versa
- Questions/Comments
  - Make sure that your technical working groups are making progress – it is not what happens at the meeting, but what happens between meetings.
  - Strive to increase attendance and increase diversity of attendees.
  - Possible theme for future meeting- Urban Herpetology (Joe Mitchell and Robin Jung publication)
  - Fund solicitation: find herpophiles in the various agencies and contact them. Stafford Madison offered to help surface these types of folks.
  - Ernie and Priya will be attending various meetings on behalf of PARC

### Updates on NEPARC Projects:

**Herp Regulations by States** - Al Breisch (NY-DEC) surveys sent to all NE states with 4 questions:

- Any changes in regulations?
  - CT-no diamondback terrapin hunting season now
  - NH- developing regulation changes now
  - NY- dangerous animal law- now need permit for venomous herps and for crocodilians
  - PA- rewriting all herp regs
  - RI- now illegal to sell and possess native herps (PARC guidelines were used to help the language of this law)
  - VT- added 2 species to their endangered species list
  - VA- regulations to protect Spotted Turtle and Hellbender
  - WV- working on their regulations
- Any pertinent court decisions?



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- NJ- A ruling that any habitat that the organism uses is considered critical habitat. Test case was the Southern Gray Treefrog (*Hyla chrysoscelis*)
- Any convictions?
  - NH- 9 cases of illegal venomous snake possession or killing
  - PA- illegal selling of Bog Turtle
  - VT- \$500 fine for possession of a Timber Rattlesnake
  - VA- illegal collection of treefrogs
- Acquisitions of herp habitat?
  - ME- turtle habitat in coastal area
  - NJ- 1.5 million budgeted for land buying
  - NY- 225 acres with Bog Turtle habitat
  - PA- easements for Bog Turtle in SE and Massasauga in NE
  - VA- conservation easements
  - VT- working on Spotted Turtle habitat
  - RI and NH also had some habitat acquisition occurring

### **Risk Assessment Species Data Matrices - Linda Weir (USGS)**

- Goal was to develop ranking for which species of the Northeast at most risk. Ranking process was not attempted; instead information gathered is presented for use by others.
  - 38 questions developed on relevant biological attributes
  - Conducted scientific literature search
  - Assessed gaps in knowledge
- Now on NEPARC website
  - Downloadable pdf files for each question and taxa
  - Bibliographies also as pdfs by taxa
  - Original excel table version available by request
- Hoping to update in the future, some possibilities:
  - Populate with new or overlooked information
  - Expand questions

### **Education Project - Stafford Madison (US-EPA)**

- Landowner's guide to appreciating amphibians and reptiles proposed- **writer(s) needed to help with text.** Guide would have basic and interesting information and also tips on how you can help. Also a section on resources for interested landowners.

### **Northeast Habitat Management Guide-Joe Mitchell (U. of Richmond)**

- Working group started in 2000
- Midwest guide published 10,000 copies that were snapped up instantly
- Aiming for 100 page document
- Some sections can act as a template that can be used in any region
- Will have variety of guidelines that are applicable to land owners with a variety of levels of interest in herp management.
- Appendix A is a matrix of species by habitat type
- Appendix B gives conservation options for different species



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- **Joe asked for photos and has a list of needed subjects (example: photo of someone clearing out woody vegetation) in order to make the Northeast HMG's images be representative of whole region.**
- Northeast HMG will go to press in November

### **Forestry Certification Standards - Mary Beth Kolozsvary (New York State Biodiversity Research Institute)**

- Robert Brooks is chair (he couldn't attend); there are 5 members total on this committee
- Certifies eco-friendly lumber
- Two certification programs are currently active in the Northeast: FSC (Forest Stewardship Council) and SFI (Sustainable Forestry Initiative)
- Trying to identify ways that certifiers can incorporate the HMGs into their certification standards
- A sample matrix was created to compare the draft HMGs for seasonal wetlands (i.e., threats and recommendations) to SFI (performance measures and indicators)
- To continue with this, we need to create additional matrices, using the final HMGs, to compare each of the habitat types to both the performance measure and indicators for both certification programs (i.e., FSC and SFI).
- Some questions to explore at this meeting:
  - Should we continue with this approach for other than just the seasonal wetlands (e.g., permanent wetlands, streams, rivers, estuarine/marine, mesic upland forests, spruce/fir forests, xeric upland forests)? [It was agreed that, yes, it should continue.]
  - Are there other ways to approach this? [No alternatives were suggested. However, 2 additional columns to add to the matrix were suggested: 1) is the issue currently incorporated into the certification standards (and to what degree) and 2) room for "comments".]
  - Should we confer with FSC and SFI representatives before we continue with the matrix? Bring them into the process early? This may help streamline the process, better direct our efforts, and also potentially bring them on board early (and not alienate them). [It was agreed that it sounds like a good idea.]

### **Model Land Use Guidelines - Liz Johnson (American Museum of Natural History)**

- Speaks to land managers of three levels:
  - Individual landowners
  - Town/county level
  - Landscape level management
- Have list of groups who deal with land use
- Could scan local level ordinances for good ones
- Question is: how do we determine that the ordinances are used properly?

### **State Agency Summary of Herp Projects - Scott Smith (MD-DNR)**

- Spreadsheet of state agency funded Herp projects in the Northeast & nearby states by species and other groupings



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Compiled to look for patterns, gaps, chances to cooperate & aid in identifying potential projects for SWG funding
- Data taken from 2004 Draft PARC State Agency Herp Project Summary and solicited updates from state contacts
- NAAMP is most common active project
- Very little salamander work
- Exceptions: Mole Salamanders getting some attention (esp. in Maine)
- Tiger salamander monitoring in a number of states
- 5 states working with Hellbenders
- Lots of turtle work: Spotted, Wood, Blanding's (with 3 states doing on-the-ground management), Bog (7 states with good deal of management)
- Only 2 states doing Diamondback Terrapin work
- Very little lizard work
- 9 of the 13 NE states doing snake work, Timber Rattlers get most attention
- Discussion from groups asking if this summary should be more all encompassing (i.e., include University projects, etc). No conclusion reached.

[end of NEPARC project updates]

### **Iridoviruses of Chelonians and Other Emerging Pathogens of Reptiles and Amphibians** - Presentation by April Johnson (University of Florida, College of Veterinary Medicine)

- Symptoms of Iridoviruses are similar to many other diseases such as herpesvirus or Upper Respiratory Tract Disease (URTD), so it is hard to identify without testing
  - Nasal discharge, swollen eyelids, ocular discharge, and yellow-white plaques in the mouth are commonly seen in infected turtles
- 3 cases reported prior to 2003. Since 2003 University of FL has IDed 16 cases at their lab
  - Seen in wild gopher tortoises, Florida and Eastern box turtles
  - Seen in captive Burmese star tortoises and African spurred tortoises
  - Five states: FL, GA, TN, VA, PA
- Two mass die offs of turtles (in GA in 1992 and TX in 1998) were revisited. Study of tissue showed iridovirus-like particles on electron microscopy
- Iridovirus infections of chelonians are likely more widespread than is currently recognized
- Unknown mechanism of transmission - possibly oral or vector borne?
- Possible Link to Amphibians infected with iridovirus
  - Leading cause of amphibian mortality in US
  - Especially prevalent in late summer and early fall when many of these turtle cases were observed
  - Iridoviruses have been shown to infect multiple hosts
  - Some turtle deaths were in areas where amphibians were carrying iridovirus
- Conclusion
  - Always try to thoroughly investigate any disease outbreak because the management techniques used to deal with the outbreak will vary according to the pathogen that is causing the disease.



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Always disinfect your boots and equipment between field sites to reduce the risk of transmitting any pathogen between populations.
- April offered to test any samples that were sent to her. She recommended sending a swab of the turtle's mouth or a blood sample. She can be contacted at [JohnsonA@mail.vetmed.ufl.edu](mailto:JohnsonA@mail.vetmed.ufl.edu) for more information.

### SESSION ADJOURNED

After dinner, a group of about 30 joined Jim White for a field trip he hosted to a nearby coastal plain pond. The group mucked about in the pond for about an hour and numerous larvae of Rana and Hyla species were captured. Barking Treefrog larvae were prominently represented.

## **August 24<sup>th</sup>: Day Two**

---

### **Comprehensive Wildlife Conservation Strategies (with focus on herps with greatest conservation need) – Presentation by Al Breisch (NY-DEC) filling in for Alison Whitlock (US-FWS)**

- Every state is required to produce a CWCS
- Public comment is to be actively solicited
- State Wildlife Grants for FY02-05 given for planning of CWCS
- CWCS to be completed by October 2005
- States without a CWCS are not to be eligible for further SWG monies
- If CWCS rejected, no SWG monies will be available to that state
- If given conditional approval, state has six months to revise
- Approval by feds based on eight elements:
  - 1-Information on distribution and abundance of wildlife (some states might not include herps)
  - 2-Description of locations and conditions of habitats
  - 3-Description of problems for species and priorities for research
  - 4-Description of conservation actions taken
  - 5-Plans for monitoring species and habitats so that progress can be quantified
  - 6-Descriptions of procedures in place to modify the CWCS (at least every ten years and, ideally, annually)
  - 7-Plan for coordination with interested groups (e.g. state agencies, tribes, local governments)
  - 8-Assurance of broad public participation
- National Acceptance Advisory Team
  - Looks at all state plans
  - Member of team from federal and state agencies
- List of Species of Greatest Conservation Need (GCN)
  - Each state makes own definition
  - Exceptions: NJ has Northern Bobwhite in plan and NY has included the American Eel



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Northeast Endangered Species and Wildlife Technical Committee
  - Developed lists within the 13 states for species that should be looked at by multiple states
  - If species already on endangered species list it is not included
  - If species is only in one state, it is not included
  - List published in 1999. It included: 15 mammals, 23 birds, 15 reptiles, 12 amphibians, 30 fish and 11 freshwater mussels
- October 2004 feds asked all states to send in revised GCN lists. Lists were to include:
  - GCN list
  - Priorities for listed species
  - Process of how list developed
  - Feds would compile list and ensure consistency
- Results
  - 14 states sent in their GCN
  - Most were posted on the web
  - No NE states have sent in a completed plan yet
- Each state plan is unique
  - When patterns emerge, though, intra state cooperation might emerge
  - Some states just listed GCNs as a block
  - Others had ranking systems
- Aggregate of all states current listings:
  - 77 mammals, 309 birds, 64 reptiles, 72 amphibians, 434 fish, 175 mollusks, and 1,167 invertebrates
- By comparison, 78 species of reptiles listed by NEPARC
- Benefits of State GCN
  - Brings experts together
  - Illustrates diversity of region being dealt with
  - Updates states' status list
  - Encourages consistency in taxonomy
- Some next steps
  - Finalize state plans
  - Update state and federal listings
  - Lists due in by October 2005
  - USFWS will compile lists
  - For further questions, please contact Alison Whitlock

### **Conserving Box Turtles: We Need To Do More-** Presentation by Chris Swarth (Jug Bay Wetlands Sanctuary, Maryland)

- Box Turtles are a species well known by the public and are often seen. Yet, population numbers are going down.
- Problems for box turtles
  - Lots of public handling and capture
  - Many instances of road mortality
  - Loss of habitat
- Chris referred audience to the summary of the 2004 Eastern Box Turtle Regional Conservation Workshop which he handed out at the outset of his talk
- Challenges to researchers
  - Box turtles hide well, so difficult to census



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Life History
  - Slow to mature, long lived
  - Low reproductive rate, high adult survivorship
  - Variable sex ratio
  - Non-territorial
  - Both terrestrial and aquatic
  - Omnivores
  - Widespread (known in 30 states)
- Box turtles need viable reproduction sites, which are tough to find in fragmented habitat
- At Jug Bay they put transponders on hatchlings, but receiver apparatus didn't work
- One 3 decade study by L. F. Stickel showed a population drop at study site from 300 in 1945 down to 80 in 1995 (2005 numbers projected to be even lower)
  - Floods, dam releases and development might be the instigating factors
- General causes of population decline
  - Roads (fragmentation and road kill)
  - Habitat loss (in MD wetland and forest being lost)
  - Collection as pets
  - Mower slices
- At 2004 workshop, questionnaire handed out. Threats to box turtles ranked from biggest to least threats:
  - Habitat fragmentation
  - Development
  - Road mortality
  - Collection
  - Lack of data
  - Lack of public knowledge
  - Agriculture
  - Other threats included: invasive plants and mowing
- Need more data on population structure
  - Study in FL showed OK structure
  - Jug Bay showed OK structure
- Feasible Demography Equation
  - To use equation you need data on: Age of Maturity, Adult Survivorship, Reproductive Life Span
  - Chris showed a table for Box Turtles that showed that they needed an annual adult survivorship well over 95% to maintain population
  - Conclusion was that things like road kill can devastate box turtle populations
- Comments that came back from breakout sessions at the 2004 workshop
  - Needed research: life history, effect of small population size, hatchling biology, impacts of development, infectious diseases, repatriation efforts,
  - ID key road crossings, improve communication between researchers, and implement standard survey techniques
- Regulations
  - Protect the species now



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Develop a definition of Species of Special Concern
- Use the State Threatened and Endangered process
- Improve law enforcement
- Habitat protection regulations
  - Get public involved
  - Coordinate regulations between states
  - Give states more power to protect habitat
- Repatriation
  - Study survivorship of head started turtles
  - Study impact on pre-existing populations
  - Study survival rate of rehabilitated turtles that are returned to wild
  - Advise rehabbers on best methods of returning turtles to wild
- Development threats
  - Work with developers
  - Work with open space and planning boards
  - Consider land banks
  - Protect turtles on sites being developed
- Education- Chris referred audience to workshop summary
- Resources and current projects
  - Ken Dodds' book and website
  - Ann Somers' Box Turtle study manual
  - Working on recommendations from workshop and a stewardship guide
  - Jug Bay census project: from 2000-2005 150 censuses done
  - Greenbrier SP in MD put up 2 miles of drift fence to direct turtles to culverts

## **BREAKOUT SESSIONS**

### **Session 1: Marketing for Habitat Management Guide**

- I. The group agreed that the Habitat Management Guidelines were developed for use by any group or individual that manages or otherwise affects wildlife habitat suitable for herps, such as federal and state land managers, land trusts, nonprofits with a land protection focus, county and regional planners, etc.
- II. The group determined which organizations should get complimentary copies of the guide based on a) having assisted with funding of the project and b) are considered target audiences that could put the guide to use immediately. These groups are as follows: US Forest Service, Natural Resources Conservation Service, State Agencies Division of Fish and Game, U.S. Fish and Wildlife Service refuge managers, US EPA, National Park Service, Department of Defense, Army Corps of Engineers, Department of Transportation, Bureau of Indian Affairs, federal and state park staff, Federal Highways, USGS, National Marine Fisheries Service, IAFWA, The Nature Conservancy, Audubon, Ducks Unlimited, state cooperative extension staff, timber industry (NCASI), universities/colleges with land holdings.

To ensure that the document gets into the hands of the "right people," the appropriate representative for each state agency will be identified by Priya



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

Nanjappa prior to bulk mailings to each state. A cover letter will be written for each state contact that contains suggestions for state-specific dissemination and emphasizes how few complimentary copies are available, and will hopefully encourage the recipient to distribute them wisely.

It was also discussed that a spreadsheet be generated (by NEPARC) for each state rep to help then track who they have given copies to.

### III. Developed a plan to market the guide's availability (for purchase) for all other potential interested parties.

1. Post notices on listservs, such as PARC, Herp Digest, Ecological Society of America, academic listservs (Valerie Titus agreed to research academic listservs)
2. National PARC will issue a press release
3. Develop a one-page flyer or poster announcing the HMGs for use at exhibits
4. Post a PDF version on applicable websites (EPA New England has already agreed to this)
5. Book reviews and notes to professional journals, including the Society of Wetland Scientists, American Planning Association, Association of Outdoor Writers, Conservation in Practice, Northeast Naturalist

### IV. Follow-up items and general thoughts:

- Ernie Garcia will contact Ben Wigley, a timber industry representative, to help get the timber industry on board.
- It would be ideal if someone in NEPARC could follow up on the dissemination to determine how and if the guidelines are being used.
- We need to garner support in upper management within agencies like DOD to get them to use the HMG's.
- Ernie or Priya will check on the distribution for the Southeast and see if they have an example of who is using the HMGs and how they are being used.

## Session 2: NEPARC & Box Turtle Conservation

- The two co-chairs for this working group are Dave Golden and Holly Niederriter
- Educational brochure
  - Look for co-sponsor, USFWS may take lead on producing and publishing
  - Develop protocols for what citizens should do if box turtle found, etc.
  - Web page with links to NEPARC/PARC
- Target transportation departments
  - Ecopassages
  - Roadside mowing height
- Attend SAA annual meetings

**Mitigation Measures to Reduce Highway Mortality of Turtles and Other Herpetofauna at Lake Jackson, Florida** - Presentation by Matt Aresco (Florida State University)



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Some areas of Florida still are relatively road less, but increasing development has increasingly put herps at risk from road mortality
- Affects of Roads
  - Habitat loss
  - Loss of habitat quality
  - Fragmentation
  - Direct mortality
  - Creation of edge
  - Hydrological changes
  - Chemical changes
  - Noise and light disturbance
- Study site was at Lake Jackson along Route 27 about 7 miles outside of Tallahassee
- Very diverse for vertebrates
- Sinkhole lake that dries down every 15-20 years (last dry down was 1999)
- Rt. 27 built in 1920's and then had a major build up in the 1960's
  - Only one culvert running under road
  - Route cut off an arm of the lake (known as little Lake Jackson)
- In February of 2000 Matt found 90 dead turtles along a 1/3 mile stretch of the road. After some cajoling the Department of Transportation allowed Matt to put up 2500 feet of silt fence (DOT donated the fence). Matt erected the fence between the lake and the highway with flanks leading back towards the lake on both ends. The fence was also angled towards the lake to make it more difficult for turtles to scale.
- Data Collection
  - Daily surveys of 1.2 km of highway
  - Pre-fence installation: 40 days of survey
    - 360 turtles killed
    - All turtles killed on first 1/10<sup>th</sup> of road width
  - April 2000 silt fence installed along Rt 27 North
  - September 2000 fence installed along Rt 27 South
  - Area monitored for 60 consecutive months
    - 4 times a day in 2000-2001
    - 2 times a day in 2002-2005
- Counted all vertebrates on road and along fence
- Transported all turtles to the side of the road to which they were headed
- Monitored use of the culvert
- Broke length of road into numbered segments so could determine prime crossing points
- 15% of turtles marked
- Results
  - 10,982 herps counted during the 40 months (44 spp, 11 of which were turtles)
  - About 3,000 turtles captured twice
  - 34% of marked turtles recaptured
- Efficiency of fence
  - Without fence 99% of turtles entering road area were killed
  - With fence 1% were killed
  - In 1977 it is estimated that 32% of turtles could get across



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Due to increase in vehicular traffic, almost 0% got across
- Effects on Turtle Sex Ratios
  - Females like roadsides as nesting habitat
  - At Lake Jackson, in 3 species of turtles sex ratios weighed more heavily towards males in percentages ranging from 65 to 80% (probably due to female road kills)
  - At pond away from roads the male ratio was much lower (all under 60%)
  - Turtle population declines near roads may be due to female road kill
- Problems with Fencing
  - Some turtles will climb them
  - Erosion, vandalism and UV cause breakdown
  - Must be maintained
- Ecopassages
  - Concrete guide walls to funnel animals towards under highway culverts
  - Can also use guardrails installed flush to ground
  - Stops almost all turtles
- Ecopassages for Route 27
  - For \$3.5 million could retrofit Rt. 27 with 4 culverts
  - DOT wouldn't consider at first
  - After non-profit established and website went up, DOT approved \$60,000 for project development
  - Funding coming from Federal Transportation Enhancement Funds which has one category for wildlife crossings
- Proper lighting for culverts important
- Aerial shots showed that it was a non-random migration towards Little Lake Jackson
- Dead turtles on road are an issue for traffic safety (especially if there are lots on road)
- 3 foot diameter culvert might be too small. Matt recommends 6ft diameter.
- Turtles don't learn where culverts are and must be directed there
- Publications for more info:
  - Aresco, M. J. 2005. The effect of sex-specific terrestrial movements and roads on the sex ratio of freshwater turtles. *Biological Conservation* 123(1):37-44.
  - Aresco, M. J. 2005. Mitigation measures to reduce highway mortality of turtles and other herpetofauna at a north Florida lake. *Journal of Wildlife Management* 69(2):549-560.

### Action Items Discussion

Some action items and other NEPARC business were discussed in during the afternoon of Day Two. These items have been moved to the final section for consolidation purposes.

ADJOURN FOR BANQUET

### Silent Auction



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

Participants were invited to contribute items for a silent auction to raise money to allow NEPARC to reduce registration fees for students at future meetings. Auction items included herp t-shirts, posters, books, stuffed animals and other items. The auction raised \$220. Thank you to all who contributed items.

**Amphibian Brothels, Unpronounceable Plant Names and Whale Wallows: What the Heck is a Delmarva Bay?** Evening presentation by Jim White (Delaware Nature Society) & Bill McAvoy (Delaware Natural Resources and Environmental Control)

### **August 25<sup>th</sup>: Day Three**

---

**Ernie Garcia and Priya Nanjappa** - Some comments from PARC to NEPARC

- Good attendance and variety at NEPARC 2005. More attendees would be great. Challenged group to try to each get two new people involved. Also get more organizations involved.
- For proposed projects; evaluate priorities and delegate tasks evenly. Ernie and Priya will monitor progress towards goals and emphasized that NEPARC should feel free to come to PARC for help when needed.
- Also reminded us to be sure to bring emerging issues to them because we are often in position to act as early warning and they are often in a position to apply resources.

**Using GIS Technologies to Protect Vernal Pools and Other Wetland Habitats in New Jersey** - Presentation by Dave Golden (NJ-DFW)

- Endangered and Nongame Species Program
  - Survey, monitors and Manages for Threatened and Endangered Species
  - Identify and Protect Critical Habitat
  - Incorporate rare species sightings into Biotics database
- Challenges to wildlife
  - Habitat loss
  - Fragmentation
  - Roads
  - Urban sprawl
  - Water quality degradation
- Threatened and Endangered Species
  - 63 T&E species in NJ
  - 6 amphibians (3 endangered and 3 threatened)
  - 6 reptiles (4 endangered and 2 threatened)
- Protection Methods
  - Active Management
  - Land Acquisition
  - Public Education



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Regulation
- How GIS factors in
  - Helps regulators in making informed land use decisions. Once data entered into GIS, when a permit is sought regulators can check data layers to help to decide on granting permit.
  - If information isn't available to permitting agencies, sometimes permits are unknowingly given for areas where species occur. (e.g. the Sanctuary development project was given permission to start in an area that had Rattlesnakes, Pine Snakes and Pine Barrens Treefrogs)
- Vernal Pool Project
  - Most vernal pools in NJ are less than 1 acre
  - Regulations allowed the filling in of wetlands less than an acre with a general permit
  - When vernal pool certification began (Sept. 2001), these wetlands got some protection
  - If hydrological and biological criteria met:
    - Pool cannot be filled using a general permit
    - A 50 foot upland buffer is afforded the pool
- Implementation of Vernal Pool Project
  - Using aerial photographs, 15,000 potential pools showing hydrological criteria were identified
  - Data forms and information needed for certification are available on web
  - Citizens can gather data to support candidacies for potential vernal pools
  - It is hoped that the access to public information will help guide developers to avoid planning developments in vernal pool areas.
  - If a permit is applied for to do work at a wetlands, the applicant must give access to NJ State employees for vernal pool surveys and possible certification
  - If a permit request comes in during the off-season, the decision can be held until the onset of the active vernal pool season
- Landscape Project
  - A habitat-based method of mapping rare species locations using GIS technologies
  - In the past they had kept data secured to protect rare species
  - Led to landowner frustration
  - Had used a 2 mile diameter around a rare species sighting as a management zone
  - Now rare species sightings are used to rate the value of the spot where sighted and then this value is factored into the contiguous habitat of the same type.
  - The data layer generated from these patches is available to the public
  - The version of the map available to the public give information on what is in a patch, but not the exact location of the sightings
  - Using the example of the Sanctuary development, patches would have lit up on the data layer and red flags would have gone up before permits were issued.
- End Notes
  - Landscape Project originally funded by federal money, now funded by SWG monies



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- It wasn't until 2001 that the regulations came into play that begged the use of the GIS data layers that had originally been created for the use of planners.
- 25% of the current Endangered Nongame Species staff are GIS techs
- So far, the data layer with specific information about exact locations of rare species hasn't been compromised by the Freedom of Information Act
- 75% of potential pools identified from aerials that have been groundtruthed have turned out to be actual pools (Cautionary note from Scott Angus: about 80% of the pools he has come across don't show up on aerial photography)
- More information available on: [njfishandwildlife.com](http://njfishandwildlife.com)

### Action Items & NEPARC Business

#### Nomination and election of new co-chair

- Co-chairs represent NEPARC at PARC meetings, conference calls. Some travel involved. Helps organize the annual NEPARC meeting. Keeps in touch with working groups, etc.
- Nominees were:
  - Mike Marchand (NH Fish and Game)
  - John Kloepfer (VA Dept. of Game and Fish)
- Mike Marchand was elected as new co-chair
- John Kloepfer offered to host the 2007 NEPARC meeting in Virginia

#### NEPARC Steering Committee

- Creating an official steering committee was proposed and accepted
- Membership should include:
  - 2 co-chairs (2 yr terms with staggered terms)
  - Host of upcoming NEPARC meeting
  - 2 or 3 additional members to represent diverse membership (state/federal/academic/other)
  - Members at Large (i.e. long term NEPARC members)
- List of potential members generated. A conference call will be set up among them and the NEPARC co-chairs to work out the details of who will fill each post.

#### Likes and Dislikes of the NEPARC 2005 Meeting

- Scott Smith suggests Road Kill as theme for next NEPARC meeting
- Stafford Madison will get info on a road Mortality symposium in Maine
- Consensus seemed to be that having 1 full day sandwiched between 2 half days worked well. It was suggested that this item be put up on the listserv so that those that couldn't attend could weigh in.
- Having a themed conference was favored, although retaining diversity was also important.



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Having themed presentations and then choosing topics for breakout sessions according to need
- Was suggested that habitat fragmentation might be good theme (as opposed to more focused road mortality theme).
- It was felt that more time was needed to discuss action items in the breakout sessions
- Discussion of action items at the conference helped attendees to get closure on items as they were completed.
- Good mix of field and lab focuses in the presentations
- Good mix of presentations focused within the region and without
- Suggestion that having the conference so late in August precluded many university representatives from attending. Suggested having conference a week or two earlier
- Poster session was good, also is a good selling point to superiors to justify to them attendance to conference
- On site housing was good, especially since staying at hotels in resort area can be expensive
- Maybe have an official facilitator to keep things on track, but others commented that a bad facilitator can be much worse than no facilitator.
- To break up the full day, suggestion to have a break in mid-day so that folks could enjoy the area and then starting up again at 4pm
- Better acoustics in meeting room might help, some attendees mentioned that it was hard to hear speakers over air-conditioning

### **Comparison of NEPARC and SEPARC conferences**

- Matt Aresco is a regular attendee of SEPARC so he was a primary sounding board for this discussion, although others did have some SEPARC experience as well
- Both groups have a committed membership
- SEPARC has strong university and timber industry presence
- SE has a full day field trip on third day
- Education outreach group is big in SE
- About 90 people regularly attend SE conference (NEPARC hovers around 50)
- Suggested that a combination NE and SE conference might be attempted

### **Other Items**

- Need a more formal system to encourage new folks to join NEPARC
- Maine is underrepresented at NEPARC
- Working group leader tasks:
  - Contact co-chairs by September 1st
  - Provide list of people in your group
  - Work at task lists and deadlines
- Two conferences upcoming that NEPARC might want to be involved with:
  - Northeast Natural History Conference - April 20-21, 2006
    - Mary Beth Kolozsvary will coordinate Natural History Conf. with a theme of Road Kills (Al Breisch and Liz Johnson volunteered to offer assistance in identifying potential speakers)
  - Fish & Wildlife Association Conference – April 23-26, 2006



## NEPARC 2005: Meeting Minutes

Biden Environmental Education Center  
Cape Henlopen State Park, Lewes, Delaware  
August 23<sup>rd</sup> – 25<sup>th</sup>, 2005

- Al Briesch will ask Bob Brooks about representing NEPARC at this conference.
- Habitat Management Guide – need presenter
- Risk Assessment product - Mike Marchand agreed to present
- Box Turtle project - Chris Swarth or Holly Niederriter will present
- Box Turtle Conservation
  - Will work to get some product out (e.g. brochure) as education for public on the plight of the box turtle
  - USFWS will fund a brochure
  - Baltimore Zoo might already have brochure, so, check to see if a good product is already out there
  - Issues to educate on: habitat fragmentation, road mortality, collecting, basic biology
  - Get brochure up onto the NEPARC website and also on State websites
  - Chuck Landry offered to produce a short video spot
  - Get some examples of warning signs for roadways (vernalpool.org might have some examples)
  - Meredith Whitney offered to start Box Turtle Working Group listserv
  - Al Breisch suggested adding some general turtle info to product
- Habitat Management Guide
  - Training- Ernie Garcia said PARC would put together a syllabus
  - HMG training committee formed: Ernie, Al Breisch, Scott Smith & Dave Golden
- Model Land Use Working Group
  - Liz Johnson leads group
  - Preliminary list of planning resources on web
  - Try to gather herp specific regulation and evaluate if regs are good
  - Stress that any regs posted by NEPARC are site specific
  - Put links on to land use guide on state web
  - It was noted that municode.com has lots of regs on it
- Ernie's proposed biocides project
  - An educational tool (maybe a flyer) about herbicides/pesticides to be given to hardware stores, garden shops etc.
  - Later suggested this might be a project for Midwest PARC to develop

### MEETING ADJOURNED

**Thanks** - NEPARC would like to acknowledge the efforts involved in assembling the 2005 meeting minutes. Matt Bailey took minutes during the meeting. Revisions to the draft minutes were completed by Ernie Garcia, Dave Golden, April Johnson, Mary Beth Kolozsvary, Stafford Madison, Mike Marchand, Joe Mitchell, Priya Nanjappa, Holly Niederriter, Scott Smith, Chris Swarth, and Linda Weir.