Presentations

Presentations were given on Friday morning, Friday evening, and again on Saturday morning, but are reported together here.

Welcome and Introductions - Gary Casper (gcasper@charter.net) and Bruce Kingsbury (kingsbur@ipfw.edu), Interim Co-chairs

- Pleased to see so many people (70 participants) from across the Midwest.
- Great opportunities to work collaboratively across jurisdictions.
- The work of PARC is mainly initiated at the level of the regional working group. The goal of this meeting is to come away with action items/projects for MWPARC.
- As an organization of partners, we must identify and help Midwest partners.
- The State Wildlife Grants offer a tremendous opportunity for funding amphibian and reptile conservation.

Keynote Address: Challenges in Herpetofaunal Conservation and the Role of PARC - Whit Gibbons, Savannah River Ecology Laboratory

- Amphibian population declines have received the most attention, but reptile populations are declining as much, or more.
- Long-term amphibian studies (>28 yrs.) at the Savanna River Site (SRS) have revealed changes and trends in populations that would not have been discovered in shorter-term studies.
- A 2003 study in Ellenton Bay captured 1100 reptiles (35 species) and 407,943 amphibians (24 species). The biomass of amphibians was estimated at 3.1 tons.
- Lessons from the SRS illustrate the need to: (1) be cautious when interpreting results from short-term studies; (2) accept the challenges of funding, habitat protection, and education that is required of long-term studies; and, (3) remain optimistic.

A Short and Undoubtedly Incomplete History of Amphibian Conservation in the Midwest - Mike Lannoo (mlannoo@bsu.edu)

- Mike led participants on chronological trip through amphibian publications in the Midwest.
- There are still many basic questions to be answered concerning Midwest amphibians and reptiles. We know a lot about a few species, but tend to not think about those things we can't see, like deepwater species.
- He encouraged participants to let field observations guide future research and reminded us that we are making tomorrow's history, today.

Background and Formation of the Illinois Eastern Massasauga Recovery (EMR) Team - Mike Redmer (mike_redmer@fws.gov), Joe Kath, Kristopher Lah

- The EM was listed as a candidate species by the USFWS in 1999. States have the primary responsibility for the conservation of EM populations.
- EM is state endangered throughout its range except for Michigan where it is a species of special concern.
- There are many possible conservation actions for the EM, including proactive measures and legal/regulatory protections.
- With the encouragement of the USFWS, Illinois formed an EM Recovery Team in 2005.
- First year accomplishments have included a PVA model, habitat enhancement and restoration, a site tour, workshop, and positive media coverage.
- Illinois will present its work to other states as a model and USFWS will encourage the formation of teams in other states. State Wildlife Grant (SWG) funding is a great source for EM surveys and/or habitat restoration.

Wildlife Habitat Evaluation in Wetland Restoration: Where to build it for them to come? - Gary S. Casper (gcasper@charter.net), Tom Bernthal, Joanne Kline, Marsha Burzynski, Kate Barrett

- Wildlife diversity in Milwaukee County has decreased since pre-settlement times.
- This project developed a GIS-based Wetland Wildlife Habitat Tool to assess the predicted value of wetland restorations at a landscape level for selected species.
- Potentially Restorable Wetlands were examined for their ability to: (1) maximize habitat area and patch size; and (2) maximize habitat quality.
- Models were constructed and validated for a selected group of umbrella species from different taxa.
- GIS can be a powerful tool for identifying existing and potentially restorable habitats, as well as for prioritizing areas for restoration. The key is to provide a tool that is simple and straightforward to make it more attractive to partners and stakeholders.
- More information: http://dnr.wi.gov/org/water/fhp/wetlands/assessment.shtml

A Species Conservation Story in Wisconsin: The Butler's Gartersnake - Bob Hay (Robert.Hay@dnr.state.wi.us), Gary Casper

- The Butler's Gartersnake is found in fragmented and isolated populations in heavily urbanized SE WI.
- The WI population is genetically distinct and threatened by habitat loss and hybridization with the Plains Gartersnake.
- A Conservation Plan was drafted in 2004.
- Habitat patches were ranked on a 3 tier system based on patch size and habitat quality. Emphasis on conserving 65 tier 3 sites to reach goal of viable and secure WI population.
- A committee of the WI legislature voted in July, 2006 to suspend species from WI threatened list, despite unanimous opinion of scientists that the species is still threatened.

- Developers have been in talks with DNR biologists to team up and create a business plan which will be mutually beneficial.
- De-listing for non-scientific reasons sets a bad precedent for all imperiled species. If the species should decline further, a petition for federal listing may be filed.
    - UPDATE: As of late September 2006, the legislature is pressing forward with de-listing, and did not agree to the plan that the team of developers and scientists presented. WI DNR has until mid-November to agree to the committee's requests.
- Conservation strategy available at: www.dnr.state.wi.us/org/land/er/review/Butler

Project Updates:

Center for Reptile and Amphibian Conservation and Management at IPFW - Bruce Kingsbury (kingsbur@ipfw.edu)

- Eastern Massasauga: ecology, management, headstarting and translocation.
- Copperbelly Watersnake: ecology, status, and recovery.
- Eastern Fox Snake: ecology in disturbed coastal habitats.
- Eastern Box Turtles: response to prescribed fire.
- Website
- Habitat Management Guidelines for Amphibians and Reptiles of the Midwest
- Snakes of the Midwest CD
- Midwest Ephemeral Wetland Power Point Presentation and Speaker's Guide

Gary Casper (gcasper@charter.net)

- New Book: Best Management Practices for Aquaculture in Wisconsin and the Great Lakes Region. Includes BMPs for amphibians and reptiles.
- Monitoring: need for greater consensus and coordination.
- Status and Conservation of US Reptiles: planning for book has begun. Gary Casper, Whit Gibbons, and Joe Mitchell

Direction of Blanding's Turtle Management in Illinois - Daniel R. Ludwig (dan.ludwig@illinois.gov)

- Listed as threatened in Illinois.
- Survey of experts found interest in developing a regional conservation and management plan.
- Concern about apparent lack of recruitment in populations.
- Additional work needed includes field surveys, genetics, identifying and protecting important habitats, ranking of populations, and consultation of IDNR with developers.

Amphibian Research and Monitoring Initiative (ARMI) - Mark Roth (mroth@usgs.gov)

- Established to assess statuses and study declines.
- Working on several Dept. of Interior lands in Upper Mississippi.
- Conducting surveys for Blanchard's Cricket Frog.
- Samples submitted for disease screening.
- Examining threats to persistence: habitat loss and fragmentation; agricultural practices; climate change.
- Co-sponsoring workshop: Understanding Agriculture's Effects on Amphibians and Reptiles in a Changing World. Information at: http://www.umesc.usgs.gov/ag_effects_workshop/workshop.html
- ARMI has been involved in the research and development of occupancy models to study amphibians. A factsheet is available at: http://pubs.er.usgs.gov/usgspubs/fs/fs20053096

DISTINGUISHED GUEST SPEAKER: From Silent Spring to Silent Night: Pesticides, Amphibian Declines, and Public Health Connections - Tyrone Hayes (tyrone@berkeley.edu), University of California, Berkeley

- Atrazine, the second most common herbicide used in US (80 million lbs. annually), causes feminization and de-masculanization of Leopard Frogs. It has been used in the US for 48 years.
- Effects have been found in both the laboratory and in the field.
- These studies have resulted in a contentious debate, with Syngenta, the manufacturer of Atrazine, attacking the studies and their conclusions.
- Precipitation often contains >0.1 ppb Atrazine, more than required to show effect in Leopard Frogs.
- Recent work on the California Red-legged Frog has examined the role of multiple agrochemicals, and found results that could not be predicted from the effects of each compound individually. Additionally, frogs exposed to chemical mixtures were more susceptible to bacterial infection from ubiquitous sources; frogs not exposed to chemical mixtures (and in the presence of the same bacteria) did not develop infection.
- Stress hormone corticosterone increases with the *number* of pesticides, regardless of concentration.
- More studies are tying atrazine contamination to human illnesses, cancers, etc.
- Concluding statement: "If you are wondering how all of these freaky frogs apply to me and you, remember that you developed in water [amniotic fluid] just like my tadpoles do"

SPECIAL PRESENTATION: What We Learn With Pleasure, We Never Forget - Jeff Hohman (Jeff.Hohman@EKPC.coop), Touchstone Energy

- Funded by the Kentucky Touchstone Energy Cooperative, programs have reached 200,000+ students in 2000+ schools since 1999.
- Amphibian and Reptile Program is most requested.
- Programs focus on creating a positive experience with wildlife.
- Have also produced posters of KY's amphibians and reptiles, t-shirts, hats, videos, frog call CDs, stickers, tattoos, trading cards, and packets of native plant seeds.
- Additional activities have included teacher workshops, earth day events, and KY herp derby.

National PARC Update - Ernie Garcia (ernest_garcia@fws.gov) and Priya Nanjappa Mitchell (priya@parcplace.org), National PARC Coordinators

- Overview of PARC mission, purpose, and structure.
- Importance of Regional Working Groups (RWGs) in setting agenda, building partnerships, and carrying out the work of PARC. PARC = its members; national PARC projects are determined by the priorities and projects developed by RWG meeting attendees.
- Six major threats to amphibians, reptiles, and their habitats identified by PARC: Habitat Loss/Degradation, Diseases/Parasites, Environmental Contamination, Global Climate Change, Unsustainable Use and Invasive Species
- PARC tools and products created to address these threats include: Habitat Management Guidelines (HMG), Model State Regulations, "Don't Turn it Loose" pamphlet, and (coming soon) Inventory and Monitoring (I&M) Handbook.
- Also working on training sessions for HMGs and I&Ms, conservation summaries, and other educational materials.
- Recent "Alignment" (Strategic Planning) Workshop to focus PARC's activities and begin development of strategic plan (in progress).

Breakout Sessions

Greg Lipps (GregLipps@aol.com)

On Friday afternoon participants were asked to break into one of the working groups previously identified by PARC (management; research; education & outreach; policy, regulation, and trade; and, inventory and monitoring) or the State Wildlife Action Plans working group. Each group was tasked with identifying the three most important issues for amphibian and reptile conservation in the Midwest, using brainstorming and pair-wise prioritization.

On Saturday morning, each group presented their top 3 prioritized issues with all of the participants:

Inventory and Monitoring Working Group Prioritized Issues

1. Perform regional analysis of trends in populations from existing data.
2. Develop a matrix of inventory methods. Identify what additional methods are needed.
3. Develop a prioritized species list for inventory and monitoring.

Education and Outreach Working Group Prioritized Issues

1. Launch of a "Herp-friendly homes" project for backyard amphibian and reptile conservation.
2. Development of guidelines/model for herpetological conservation education and outreach.
3. Developing our message to the media, including talking points and marketing strategies.

Management Working Group Prioritized Issues

1. Incorporating amphibian and reptile conservation into existing management plans and actions.
2. Incorporating amphibian and reptile conservation into land use planning.
3. Examination of ecological restoration and mitigation for amphibians and reptiles.

Research Working Group Prioritized Issues

1. Development of comprehensive, up-to-date lists and distribution maps of Midwest amphibian and reptile species.
2. Assessment of current and proposed management techniques, including translocations, restorations, etc.
3. How is habitat loss, fragmentation, and degradation affecting Midwest amphibian and reptile populations and what can be done about these issues?

State Wildlife Action Plans Working Group Prioritized Issues

1. Identify important amphibian and reptile areas in Midwestern states to promote management of herps, develop collaboration among states, and improve funding in state wildlife grant process.

2. Include PARC on State Wildlife Action Plans implementation teams.
3. Increase awareness of Wildlife Action Plans among PARC members within Midwestern states.

A second breakout session on Saturday identified the tasks to be undertaken by each working group over the next year:

Inventory and Monitoring Working Group Tasks

A. Produce a complete list of all amphibian and reptile species occurring in the Midwest.
B. Provide guidance for amphibian and reptile taxonomy (with consultation of JNSC).
C. Produce a questionnaire to result in a matrix of species monitoring in the Midwest.
D. Investigate the possibility of producing species' distribution maps for all Midwest amphibian and reptile species (requires substantial funding).
E. Continue work on a reptile book, a companion volume to the recently published Amphibian Declines book edited by Mike Lannoo.
F. Produce a matrix of methods used to inventory amphibian and reptile species in the Midwest.
G. Develop guidelines for data collection and documentation for voucher specimens.

Education and Outreach Working Group Tasks

A. Compile and review information on backyard habitat programs already in existence, i.e., National Wildlife Federation, Animal Planet, Toronto Zoo's Adopt-a-Pond.
B. Review the urban/residential portions of habitat management guidelines for information useful in creating backyard amphibian and reptile habitats.
C. Identify audiences for a "herp-friendly backyard" program and most effective methods and mediums for reaching these audiences.
D. Develop guidelines for educational use of amphibians and reptiles, both in the classroom and in the field. Explore possibilities for expanding this to other regional working groups and possibly into a national PARC product (Guidelines for Herpetological Conservation Education and Outreach).

Management Working Group Tasks

A. Compile all of the existing management plans in the Midwest, beginning with plans on USFWS lands in the Midwest.
B. Examine the plans to identify opportunities for improvement.
C. Identify and recruit partners in management.
D. Develop methods for evaluating success of management.

Research Working Group Tasks

A. Complete an assessment of the research needs associated with management practices for amphibians and reptiles

B. Compile a database of the appropriate individuals and agencies involved in amphibian and reptile management (with help from Education and Outreach W.G.).
C. Complete a review of management actions, including the state of our knowledge, cost-benefit analysis, gaps in knowledge, and a comprehensive bibliography of relevant literature.
D. Convene a symposium on management of amphibians, reptiles, and their habitats in the Midwest.

State Wildlife Action Plans Working Group Tasks

A. Develop criteria for identifying important amphibian and reptile areas in the Midwest. Identify existing priority habitat designations already identified by states, NRCS, TNC, and other governmental and non-governmental organizations.
B. Circulate document showing how priority habitats are identified by Missouri.
C. Circulate document of North Carolina and Idaho processes/plans for identifying important amphibian and reptile areas.
D. Contact federal agencies in Midwest about possibilities for funding project to identify important amphibian and reptile areas of the Midwest.
E. Examine possibility of a multistate State Wildlife Grant to fund project to identify important amphibian and reptile areas of the Midwest.
F. Develop a list of regional priorities for research funding in the identified areas.

Election of Co-chairs

Two nominations were received. Bob Broadman and Greg Lipps were elected to serve as co-chairs of the Midwest Regional Working Group. A regional Steering Committee (Advisory Board) may also be appointed to help move projects forward between annual meetings.

2007 Meeting Site

Discussions were held concerning a meeting site for the 2007 Midwest PARC meeting. Suggested locations included: Touch of Nature Environmental Center (Carbondale, IL); Kellogg Biological Station (Michigan State University); Indiana Purdue University at Ft. Wayne, Indiana; and, Indiana Dunes National Lakeshore. Although more participants in attendance were in favor of holding the meeting at TONEC again in 2007 than any of the other locations mentioned, it was decided to form a committee to recommend a location, and to find out what prevented the attendance of those not present. It was also suggested that meetings be planned for the next 2 years, to minimize budgeting and scheduling conflicts for participants.