



10 Years of



AMPHIBIAN AND REPTILE CONSERVATION

Credits

Cover photos: Large background, Speckled Rattlesnake (J.D. Willson). **Front cover inset photos, top to bottom:** Green Anole (J.D. Willson), Southern Toad (J.D. Willson), Squirrel Treefrogs (John White), Barred Tiger Salamander (J.D. Willson), Sonoran Whipsnake (J.D. Willson), Eastern Box Turtle (J.D. Willson), and Round-tailed Horned Lizard (J.D. Willson). **Back cover inset photos, top to bottom:** Spotted Turtle (John White), Green Treefrogs (Paul Block), Collared Lizard, (J.D. Willson), Marbled Salamander (Robert Brodman), Red Cornsnake (J.D. Willson), Barking Treefrog (J.D. Willson), Greater Earless Lizard (Larry Jones).

Interior page photos, left margin, top to bottom: Polly Conrad and Shirley Atkinson with Pygmy Short-horned Lizard (Cris Tomlinson), Dede Olson with Cascades Frog (Mike McDowell), Amy White with juvenile

American Alligator (John White), Priya Nanjappa with Spotted Salamander egg mass (Robin Jung Brown), and Kurt Buhlmann with Bog Turtle (Joseph C. Mitchell).

Interior page photos, right margin, top to bottom: Loggerhead Sea Turtle release (Matthew Godfrey), Ernie Garcia with Indigo Snake (Joseph C. Mitchell), amphibian survey (Ray Davis), Paul Lipps exploring creek (Greg Lipps).

Inside Back Cover, clockwise from top left: Potomac River at Great Falls, Virginia (John White), Green Tree Frog (J.D. Willson), Green Sea Turtle (J.D. Willson), Northern Watersnake (J.D. Willson).

We thank the following partners for funding this brochure:

U.S. Bureau of Land Management

U.S. Forest Service

Resource Management Service, LLC

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Dede Olson with Cascades Frog (Mike McDowell), Ernie Garcia with Western Pond Turtle (Jamie Bettaso), Priya Nanjappa with Eastern Spadefoot (Isaac Chellman)

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PRODUCTION SERVICES PROVIDED BY

Bureau of Land Management, National Operations Center, Information and Publications Services Section
P.O. Box 25047, Denver, CO 80225

AVAILABLE ONLINE AT: www.parcplace.org

SUGGESTED CITATION

Olson, D.H., E.R. Garcia, and P. Nanjappa. 2009. 10 Years of PARC. Partners in Amphibian and Reptile Conservation, National Brochure No. 5. U.S. Department of the Interior, Bureau of Land Management, Denver, CO, 23 pp.

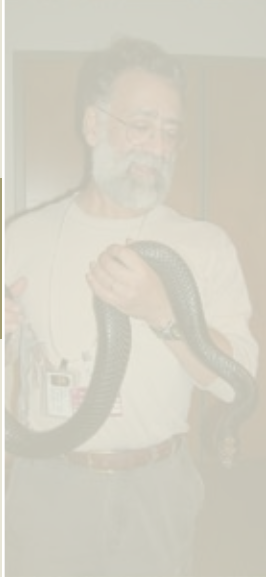


10 Years of PARC

Partners in Amphibian and Reptile Conservation (PARC) was established in 1999 to address the widespread declines, extinctions, and range reductions of amphibians and reptiles in the United States. A new paradigm for herpetofaunal conservation was needed; one that would bring together citizens, field hobbyists, scientists, and resource managers for this common goal.

PARC is

- YOU, a diverse group of conservation-minded citizens, professionals, and organizations
- intended to connect and complement existing conservation efforts
- focused on keeping common species common and protecting habitats



PARC Mission

To conserve amphibians, reptiles and their habitats as integral parts of our ecosystem and culture through proactive and coordinated public/private partnerships.

10 Years of Growth and Achievement

Expanding Partnerships

More than 1000 active members including representatives from the public, private landowners, many federal and state agencies, academic institutions, non-government organizations, industries, all U.S. states, some Canadian provinces and parts of Mexico. You can join us!

Working Groups and Task Teams

Five regions (Southeast, Northeast, Midwest, Northwest, and Southwest) and some states (e.g., Idaho and North Carolina) have active PARC programs. Conservation challenges are addressed regionally and nationally by PARC Task Teams.

Conservation Products and Services

PARC has developed a variety of solution-oriented resources to guide conservation actions.

See Details Inside!

The Need is Now

Amphibians and reptiles face multifaceted threats. Worldwide, approximately two-thirds of turtles^{1,2} and one-third of amphibians³ are threatened. We may be witnessing the 6th major extinction event

the Earth has experienced⁴. Enhanced efforts are imperative to conserve our imperiled species and the habitats upon which they rely. We need your help to devise new approaches to solve this problem!

The Need for Partners

Conservation integrates society and science and cannot be accomplished alone, hence a network of people and groups forms the foundation of PARC. In addition to the partners below, PARC includes representatives from museums, nature centers, zoos, universities, herpetological organizations, tribes, interested citizens, and many other groups. Partners are represented on PARC's Joint National Steering Committee and provide strategic consultation to guide PARC activities.

You

Private citizens and landowners provide much of the foundation of PARC, and enable conservation to happen on the ground. The impact of just one person or landowner who recognizes the value of amphibians and reptiles as important parts of our ecosystem is immeasurable. We welcome anyone to join us in our efforts!

Federal Agencies

Federal agencies have played a vital role in the creation of PARC and its continuing success and forward momentum. Over the past 10 years, the Federal partners have made substantial financial contributions, which have been instrumental to PARC's development of products and services. With millions of acres of herpetofaunal habitats under their stewardship, and their numerous biologists and resource managers, Federal agencies will increasingly depend on PARC's suite of conservation tools to put amphibian and reptile conservation on the ground. Federal agency support has also been integral to sustaining the Federal Coordinator position, initiated in 2002 and supervised by the U.S. Fish & Wildlife Service. Also, in 2002, a Federal Agencies Steering Committee was established to raise and address amphibian and reptile issues within Federal Agencies.

Federal Partners

U.S. Fish and Wildlife Service,
U.S. Forest Service,
U.S. Natural Resources Conservation Service,
National Park Service,
U.S. Environmental Protection Agency,
U.S. Bureau of Land Management,
U.S. Bureau of Reclamation,
U.S. Geological Survey,
Federal Highway Administration,
National Marine Fisheries Service, and
U.S. Department of Defense.

State Agencies

States, being the entity charged with maintaining all fish and wildlife species as part of the public trust, are another key partner in PARC. The majority of U.S. States have been active in PARC at the regional level, with more than 30 state agency partners contributing funding to develop products, trainings, and workshops, and to support the State Coordinator position, initiated in 2004. In 2008, the Association of Fish & Wildlife Agencies, a quasi-governmental organization whose members include all U.S. states and territories as well as several Canadian provinces, adopted the State Coordinator position as the new Amphibian and Reptile Coordinator. Also in 2008, the Association approved the creation of an Amphibian and Reptile Subcommittee, which met for the first time that year, and whose objective is to provide a forum for and to raise the profile of amphibian and reptile issues in the States.



Alison Haskell with Northern Red-bellied Cooter (Courtesy USFWS Region 5). Alison will remain forever in our hearts.



Conservation and Non-Governmental Organizations

Some of PARC’s most supportive partners are conservation and non-governmental organizations. They have helped PARC to sponsor workshops and symposia, served as repositories for PARC funds, and funded the development and maintenance of PARC’s website and e-mail listservs.

Active NGO Partners

Arizona-Sonora Desert Museum, Association of Fish and Wildlife Agencies, Center for Wetlands and Stream Restoration, Friends of PARC, IUCN-Conservation International, Missouri Conservation and Heritage Foundation, National Fish and Wildlife Foundation, Oklahoma City Zoo and Botanical Garden, Society of Northwest Vertebrate Biology, Tucson Herp Society, and Virginia Herpetological Society.

Industry

Active industrial partners have supported PARC with funds, in strategic planning efforts, in product development and review, and in support of PARC symposia and conferences.

Industrial Partners

American Forest and Paper Association (AF&PA), International Paper, Mead-Westvaco, National Council of Air and Stream Improvement (NCASI), Pet Industry Joint Advisory Council (PIJAC), Plum Creek Timber Company, RECON Environmental, Resource Management Services (RMS), and Weyerhaeuser.

Academic and Research Laboratories

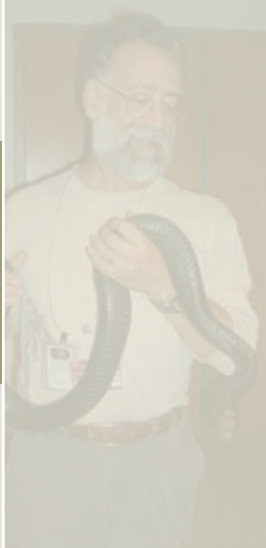
Students and professors at several academic and research laboratories have been another cornerstone in the PARC partnership. In particular, the Savannah River Ecology Lab (SREL, University of Georgia) has been an instrumental provider of human capital and leadership vital to the development of PARC and many of its conservation tools and training programs. University of Georgia faculty and students also developed and continue to maintain PARC’s website and e-mail listservs.

Academic and Research Partners

Indiana University-Purdue University Fort Wayne; Museum of Southwestern Biology, University of New Mexico; University of Georgia; and the University of Wyoming.

Environmental Consultants

Many within PARC’s ranks are environmental consultants who have provided countless hours of dedicated, and often in-kind, service to help make PARC a success. They serve as Regional and National Co-Chairs, product developers, editors, levelers, trainers, and Task Team members. We are grateful for their talents, energy, and unwavering commitment to PARC and to herpetofaunal conservation.



Mt. Bachelor, Oregon (Mike McDowell)



Juvenile Eastern Ratsnake (J.D. Willison)

How Do You Fit into PARC?

Anyone and everyone can get involved in PARC – your level of experience or expertise with amphibians or reptiles does not matter. PARC is unique in that its accomplishments to date can be attributed to its structure as a bottom-up organization (Figure 1). Each of five Regional Working Groups and state groups therein, collectively the foundation of PARC, meets annually. There, participants work together to identify amphibian and reptile conservation priorities. These priorities become projects of Task Teams at the regional level, and are carried forward to the Joint National Steering Committee. When multiple regions share the same priorities, their efforts are coordinated through National Task Teams.

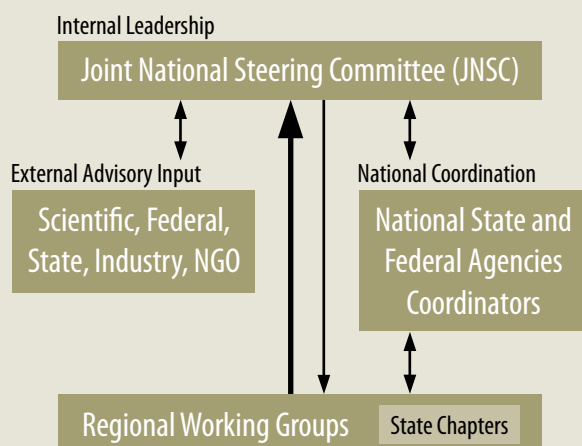


Figure 1. PARC’s Organizational Structure

Regional Working Groups and Task Teams

We invite you to join the PARC working group in your region (Figure 2), and participate in annual meetings. Regional Working Groups identify problems at a regional scale, synthesize information, and generate solutions to be used by resource professionals and the general public. Task Teams work at regional or national levels and help resolve specific amphibian and reptile conservation issues.

As part of a task team, you can help identify and work towards the resolution of issues that affect



Figure 2. Regional Working Group Map

conservation of amphibians and reptiles in the region. Join us to learn more about these unique animals and what you can do to help them where you live! See the next page for more information about Regional Working Groups.

Friends of PARC

Another way to participate in PARC is by donating to Friends of PARC. Friends of PARC, a 501(c)(3) non-profit organization, was established by former PARC leaders in November 2007 for the sole purpose of supporting the PARC mission. It is expected to play this vital complementary role by collecting and distributing funds to promote conservation and the implementation of PARC’s strategic goals. The opportunity to make tax-free contributions to Friends of PARC will soon be available through the PARC website: www.parcplace.org.

Regional Working Groups

Southeast PARC (est. 1999)

Southeast PARC (www.separc.org) has developed many of PARC's educational brochures, the award-winning "Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States," and a portion of the National PARC website. Achievements in the Southeast include: sponsoring the "Hiss America" North American Snake Beauty Pageant education project; reprinting the book *Gopher Tracks*; development of a directory of herpetologists; development and assessment of a herpetofaunal research and management questionnaire survey encompassing responses from 124 DoD and DOI refuges; and development of an amphibian and reptile photo library which has contributed to a near infinite number of PARC presentations. With funding from the U.S. Forest Service, Southeast PARC members from the Savannah River Ecology Lab developed and implemented the first Inventory & Monitoring training module, led the development of the I&M Handbook, and collaborated on the development and implementation of PARC's first Habitat Management module. One of Southeast PARC's most significant contributions has been the long-term maintenance of National PARC's website and e-mail listservs.

Examples of Regional Products

SOUTHEAST

Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States
SE Habitat Management and Inventory & Monitoring Training Modules
Brochures - *Amphibian's Eye View of Wetlands* (in conjunction with the National Audubon Society), *Indigo Snake, Is it a Water Moccasin?*
Book - *Gopher Tracks* (reprinted)
North Carolina PARC Chapter

Left margin photos top to bottom: River Cooter (J.D. Willson), Southern Leopard Frog (John White), Green Salamander (Greg Lipps), Right: Landscape (Joseph C. Mitchell); Southern Watersnake (Dirk J. Stevenson)





Regional Working Groups

Northeast PARC (est. 1999)

Northeast PARC (www.pwrc.usgs.gov/neparc) has produced a Herpetofauna Risk Assessment project, a Northeast Herpetofauna Species List, two bibliographies (road salt influences on amphibians; eco-friendly land use planning), and *Your Backyard Guide to Helping Amphibians and Reptiles*. Members of Northeast PARC have drafted the original “Model State Herpetofauna Regulatory Guidelines” (adopted by National PARC) and have taken the lead for the National PARC task team “RRTH” (Relocation, Repatriation, Translocation and Headstarting). Northeast PARC is currently developing a paper on the effects of road salt on herpetofauna, humans and the environment; additional public outreach materials on box turtles and snakes; identification of Important Herpetofaunal Areas; regional assessments of State Wildlife Action Plan herpetofaunal species of Greatest Conservation Need for regional prioritization and State Wildlife Grant funding; and a resource for herp-specific land use ordinances. Northeast PARC is assisting with the production of National PARC’s Inventory and Monitoring Handbook, and has hosted three symposia.

Examples of Regional Products

NORTHEAST

- Model State Herpetofauna Regulatory Guidelines*
- Habitat Management Guidelines for Amphibians and Reptiles of the Northeastern United States*
- Risk Assessment: Biological Attributes Contributing to Vulnerabilities
- Brochure - *Your Backyard Guide to Helping Amphibians and Reptiles*
- Video - *Box Turtles and Roads*
- Postcard - *Box Turtle (Don't Take It Home)*

Right margin photos, top to bottom: Pickerel Frog (John White), Blue-spotted Salamander (Robert Brodman), Northern Ring-necked Snake (J.D. Willson), Left: Landscape (John White), Wood Turtle (Joseph C. Mitchell)



Regional Working Groups

Midwest PARC (est. 2002)

Midwest PARC (www.mwparc.org) is distinguished by being the regional working group that developed PARC's first installment of its award-winning technical series of Habitat Management Guidelines, now being updated. Midwest PARC sponsored an ephemeral wetlands conference (Chicago, 2002), and is currently coordinating the revision of the brochure "Amphibian's Eye View of Wetlands" as well as assisting with development of the (tentatively titled) Reptiles of the U.S. book project. Other current projects include a species list and distribution maps for herpetofauna in the Midwest; an inventory and monitoring methods matrix; guidelines for data collection and voucher documentation; guidelines for educational use of reptiles and amphibians in the classroom and field; a critical review of management plans for federal refuge lands in the Midwest; an assessment of research needs associated with management practices for herpetofauna; sponsoring a herpetofaunal management symposium; and development of regional priorities for research.

Examples of Regional Products

MIDWEST

Habitat Management Guidelines for Amphibians and Reptiles of the Midwestern United States
Brochure - *Amphibian's Eye View of Wetlands*
(revision)

White Paper and Literature Review - *Raccoons and Turtle Conservation*

Left margin photos, top to bottom: Rough Greensnake (Jeff Hall), softshell turtle (Jeff Hall), Common Five-lined Skink (J.D. Willson), Right: Landscape (Greg Lipps), Northern Cricket Frog (Paul Block)





Regional Working Groups

Southwest PARC (est. 2002)

Southwest PARC (<http://chelydra.unm.edu/swparc>) has drafted the Habitat Management Guidelines for Amphibians and Reptiles of the Southwestern U.S., which is being expanded and prepared for review and publication in 2009. Southwest PARC has also completed coordinating the revision of the General PARC brochure, and has produced educational materials for “Year of the Frog” in collaboration with the Association of Zoos and Aquariums. In addition, Southwest PARC modified an existing brochure, *Living with Venomous Reptiles*, to better address the concerns of the entire SWPARC region, and is working to develop a Herpetofauna Conservation Training module in collaboration with Northwest PARC. Current efforts include the compilation of herpetofauna regulations; outreach to partners in Mexico and Hawaii as well as to underrepresented stakeholders such as enthusiasts; and the development of a priority species list to direct regional conservation efforts.

Examples of Regional Products

SOUTHWEST

Brochures - *Living with Venomous Reptiles* (revised from its original version by Tucson Herpetological Society)

Book - *Lizards of the American Southwest: A Photographic Field Guide*. (2009: Rio Nuevo Publishers, Tucson, Arizona)

Right margin photos, top to bottom: Sonoran Mountain Kingsnake (Polly Conrad), Green Toad (Larry Jones), Bleached Earless Lizard (Larry Jones), Left: Landscape (Larry Jones), Yellow-backed Spiny Lizard (Derek Hall)



Regional Working Groups

Northwest PARC (est. 2008)

In 2008, Northwest PARC (<http://uwadmnweb.uwyo.edu/WYNDD/parc/>) was officially established and sponsored meetings in Montana and Oregon. The Northwest Habitat Management Guidelines are already available and they include habitats and species of Western Canada, and Alaska in its entirety. In 2008, Northwest PARC held a Habitat Management workshop in Portland OR, and is continuing to work with existing herpetofaunal conservation groups, such as the California/ Nevada Amphibian Population Task Force, Pacific Northwest Amphibian and Reptile Consortium, and others to promote project cooperation and collaboration. The global amphibian chytrid fungus mapping project⁵ had its origins in Northwest PARC, with northwest maps produced in 2006 after the fungus was first reported⁶ in frogs in British Columbia and in Washington state. Current Northwest Task Teams include Communications; Inventory & Monitoring; Training; “Important Herp Areas” and Linkages; Diseases; Impacts of Disturbance; and Restoration. The Idaho State Working Group has been active for several years and has been especially active in advancing educational agendas.

Examples of Regional Products

NORTHWEST

Habitat Management Guidelines for Amphibians and Reptiles of the Northwestern United States and Western Canada

NW Habitat Management Training Module

Article - *Herpetological Conservation in Northwestern North America*

Left margin photos, top to bottom: Southern Alligator Lizard (Brome McCreary), Northwestern Garter Snake (Brome McCreary), Western Pond Turtle (Garth Hodgson), Right: Landscape (Mike McDowell), Boreal Toad (Brome McCreary)





International Working Group

Cooperative conservation efforts have recently been initiated for amphibian and reptile conservation efforts with partners in Mexico, Canada, and the Caribbean. PARC conservation tools such as our Habitat Management Guidelines are being shared with colleagues in other countries, and we continue to build our relationship with Conservation International and the International Union for the Conservation of Nature (IUCN) to expand our herpetofaunal conservation reach and to realize our shared goals.

Roads Task Force

Roads and highways contribute to direct and indirect mortality, and habitat loss and fragmentation. The National Roads Task Force is working with partners in transportation departments and agencies to develop solutions and conservation strategies that address passage, connectivity, collision, and other transportation issues through restoration, amelioration, and mitigation actions. A new Development Subgroup recently has been initiated to similarly work with developers and builders to help prevent and or mitigate for the effects of residential and commercial development.

Important Areas for Herpetofauna

Modeled in part on the successful Important Bird Areas concept, and spearheaded by members of North Carolina PARC, a national “Important Herp Areas” Task Team aims to promote conservation through the identification of geographic areas important to the survival of herpetofauna. The initiative is intended to be coordinated nationally but implemented locally at the state or regional scale, and is an effort to advance and prioritize habitat protection, restoration, or acquisition to ensure population persistence of target species.



Ash Meadows National Wildlife Refuge, Nevada (Polly Conrad)



Big Bend State Park, Texas (Larry Jones)



National Coordination

PARC Coordinators

Two salaried positions have made the mission of PARC a full-time operation, leading and coordinating activities as necessary to achieve PARC goals.

Federal Agencies Coordinator

With 11 US federal agencies involved with PARC, this vital position serves both as an interagency

liaison and provides key oversight of PARC activities as a whole.

State Agencies Coordinator

The Amphibian & Reptile Coordinator for the Association of Fish & Wildlife Agencies serves as the voice of the states to PARC, and vice versa, and provides overall oversight of PARC activities.



Timber Rattlesnake (J.D. Willson)

PARC's Conservation Products and Services

Habitat Management Guidelines

PARC's Technical Publication Series was initiated with the release of its first of five regionally-specific Habitat Management Guidelines (HMG).

These guides were created to address the primary challenge in herpetofaunal conservation: habitat alteration, fragmentation, and loss. They provide peer-reviewed guidance for improving the compatibility of land management decisions with amphibian and reptile conservation objectives. They are unique in that they consider ideal recommendations vs. "maximizing compatibility" recommendations when conservation of herpetofauna or habitat is not the first goal. These are now available for the Northeastern, Southeastern and Northwestern United States (the latter including Western Canada). A revised Midwest guide, as well as the Southwest guide, will be available in mid- and late-2009, respectively. Visit www.parcplace.org/habitat_management_guide for additional information or to order.

Inventory and Monitoring: Recommended Techniques for Reptiles and Amphibians

Another PARC technical publication is the upcoming handbook, *Inventory and Monitoring: Recommended Techniques for Reptiles and Amphibians (with Application to the United States and Canada)*. This handbook, funded by the U.S. Forest Service, Department of Defense, and the Bureau of Land Management, was developed to address the lack of information on the status of amphibians and reptiles, and to assist resource managers who often do not have expertise in herpetology. It provides field-tested, peer-recommended survey techniques for all U.S. and Canadian herpetofauna. For each technique, the handbook summarizes the applications to both inventory and monitoring; outlines its utility and limitations; provides a list of necessary equipment; and offers links for more detailed sources. The handbook lists all species by PARC region, and



The authors of the Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States received the first-ever Paul Moler Herpetological Conservation Award from the Florida Chapter of The Wildlife Society in April 2007. (From left to right: Mark Bailey, Kurt Buhlmann, Jeff Holmes, Paul Moler, and Joe Mitchell). Photo courtesy FL-TWS.

indicates suggested techniques for each species for two different levels of inventory (short-term and comprehensive) and two different levels of monitoring (presence/absence and population status). Visit www.parcplace.org/inventory_monitoring for additional information.

Educational Brochures

Developed with herpetofaunal conservation and human safety in mind, a number of informational brochures are currently being revised by regional working groups. Herpetofaunal conservation information also is provided via the PARC website (www.parcplace.org) and e-mail listservs.

PARC's Model State Herpetofauna Regulatory Guidelines are an example of a living document expected to be revised periodically, as needed. Originally prepared by the NE PARC Working Group, they were adapted by a National PARC task team for use nationwide. These guidelines are currently being revised, with input from amphibian and reptile hobbyists and enthusiasts.



MODEL STATE HERPETOFAUNA REGULATORY GUIDELINES

In an effort to help State Wildlife Agencies better manage and regulate their amphibian and reptile populations, the AFWA Amphibian and Reptile Subcommittee and State Agency representatives across the country are assessing the need for regulatory considerations and associated law enforcement. PARC is working on this sensitive topic with an eye to representing its diverse stakeholders' needs.

Training

Some of PARC's newer conservation tools are our regional hands-on training modules to accompany our Habitat Management Guidelines and Inventory & Monitoring Handbook. We are expanding this suite of "train-the-trainer" modules to continue to facilitate state and local training opportunities where benefits may be greatest, and offer invaluable capacity-building opportunities to those charged with managing amphibian and reptile populations, but who may or may not have a background in field herpetology.



PARC Symposia and Conferences

These issue-driven events have been unique in that they were specifically designed to bring researchers, managers, and other pertinent stakeholders together with interactive, solution-oriented discussion to address some of the world's most serious conservation challenges.

The overwhelmingly successful 2007 PARC-sponsored *Amphibian Declines and Chytridiomycosis: Translating Science into Urgent Action* symposium convened over 200 participants from nine (9) countries representing four (4) continents. Additional symposia on topics with global relevance are now being considered.



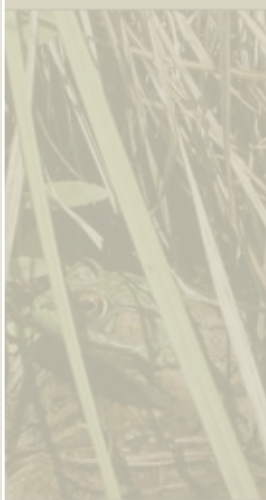
Strategic Plan

In 2009, members of PARC completed our first Strategic Plan. Our Strategic Plan spotlights PARC's goals and objectives for amphibian and reptile conservation and management at the local, state, regional, national, and international levels. Simply put, the Strategic Plan tells our partners:

- who we are
- where we are going, and
- how we plan to get there

PARC's aims are to be the leader in amphibian and reptile conservation in the United States and a leader around the world, to provide effective outreach and promote environmentally and socially responsible behaviors toward herpetofauna and their habitats, and to ensure that herpetofaunal conservation efforts are adequately funded so that ultimately, we can prevent species from becoming extinct by keeping "common species common."

PARC's first comprehensive Amphibian and Reptile Habitat Management training module was hosted by Arnold Air Force Base in Tennessee (Fall, 2007). It provided participants from across the region with a hands-on experience that featured Southeastern species and habitat identification, and focused on habitat values, vulnerabilities and conservation measures. Photo by Joseph C. Mitchell.





Eastern Collared Lizard (Larry Jones)

TEN YEARS of PARC: MILESTONES

Regional

National

1998

Dr. James Teer, Chair of the IUCN* Sustainable Use Specialist Group, convened a small meeting on conservation and sustainable use of herpetofauna in the Southeast US
Follow-up meeting. Newton, GA. "PARC" blueprint conceived

1999

Seminal PARC organizational meeting, Atlanta, GA
1st Northeast PARC meeting
1st National Steering Committee meeting, Killington, VT
PARC Policy, Regulation, and Trade meeting, Merritt Island, FL

2000

1st Southeast PARC meeting
PARC Management Guidelines organizational meeting, Atlanta, GA

1st Idaho PARC meeting

2001

PARC Management Guidelines conference, Chicago, IL

2002

PARC Federal Agencies Memorandum of Understanding signed by 7 agencies
1st Midwest PARC meeting
1st Habitat Management Guidelines: Midwest
1st Southwest PARC meeting
Federal Agency Coordinator staff position established
1st Federal Steering Committee meeting, Big Sky, MT


2003

1st Arizona PARC meeting
PARC and DAPTF* Co-sponsored Cricket Frog decline workshop, Indiana Dunes National Lakeshore

2004

1st North Carolina PARC meeting
State Agency Coordinator staff position established
National State Wildlife Agency Herpetological Conservation Report
PARCNEWS newsletter initiated
1st PARC Inventory and Monitoring Training module presented

2005

1st California PARC meeting
PARC Awards Reception
Royalties from Amphibian Declines committed to PARC by Mike Lannoo 
1st PARC-sponsored Herp Conservation Symposium, Madison, WI
PARC website receiving 500-600 hits per week


2006

Southeast Habitat Management Guidelines published
Northeast Habitat Management Guidelines published
PARC establishes formal partnership with on-line journal Herpetological Conservation & Biology
National PARC "Alignment" (Strategic Planning) workshop, Tucson, AZ

2007

USGS* and PARC co-sponsored symposium, "Understanding Agriculture's Effects on Amphibians and Reptiles in a Changing World", St. Louis, MO
PARC Habitat Management Training module presented
PARC co-sponsored conference, "Amphibian Declines and Chytridiomycosis: Translating Science into Urgent Action" conference, Tempe, AZ

2008

1st Northwest PARC meeting
Royalties from Amphibians & Reptiles of Georgia committed to PARC by John Jensen, Carlos Camp, Whit Gibbons, & Matt Elliot 
Northwest Habitat Management Guidelines published
1st AFWA* Amphibian & Reptile Subcommittee meeting, Saratoga Springs, NY

2009

PARC Strategic Plan completed

* IUCN - International Union for the Conservation of Nature, DAPTF - Declining Amphibian Populations Task Force, USGS - U.S. Geological Survey, AFWA - Association of Fish and Wildlife Agencies

The Future of PARC: 2020 Vision

PARC has adapted its course over the first decade, and has become a thriving entity across the continent, fast on the way to becoming world-recognized as a leader in amphibian and reptile conservation. The 2nd decade of PARC promises increasing momentum in amphibian and reptile conservation.

FROM 2009 TO 2019, PARC WILL BECOME STRONGER BY:

- Becoming the “Go-To” group for U.S. herpetofaunal conservation
- Growing through new partnerships
- Addressing issues with international scope
- Developing cross-integration links with other conservation efforts
- Gaining breadth and depth by tackling emerging topics

Go-To PARC

PARC is a network of conservation leaders. Go-To resources under development include, but are not limited to:

- A network of advisors, training contacts, courses, and certification programs
- Regional and National conservation priorities and plans
- Enhanced web-based resources and communications
- Incentive programs and opportunities for private landowners

Connections and Cross Integration

PARC is a naturally expanding network of concerned citizens, field hobbyists, and professionals. As new links are made in the chain of connections, these expanding partnerships are taking us across our geographic and political borders, as well as our taxonomic boundaries. Amphibian and reptile conservation will become stronger by becoming an integral component of existing efforts, for example as species boundaries cross into Canada or Mexico, or as efforts on other taxa or habitat-based approaches also consider herpetofaunal concerns.

PARC United

A national PARC conference in the next decade will celebrate the multitude of large and small achievements across the continent, because one-by-one, the job is getting done.

Over the next decade, PARC will advance with “2020” vision!

Landscapes from left to right: Bald cypress swamp, Virginia (John White), Tucson Mountain Park, Arizona (Larry Jones), Assateague Island, Virginia (John White)





Example PARC Efforts Extending to the 2010s

CLIMATE CHANGE

As scenarios of variable climate conditions unfold, species at the limits of their environmental tolerances will be especially at risk. In addition to predicting effects of altered climates on herpetofauna, management alternatives need to be designed to ensure habitat quality and connectivity. Vulnerabilities will need to be assessed.

DISEASE

Disease effects are becoming more dramatic as populations face multiple stressors, and disease organisms increase in prevalence. Strategic responses need to be developed and communicated to ensure that bio-security measures and appropriate management techniques are applied.

REGULATION & POLICY

As more wild environments transition to become managed habitats, regulations to sustain not just rare species but thriving populations of common species and multi-species communities are inevitable. Herpetofauna are one of the

few vertebrate groups that are not currently regulated by all states through the tried and true user-pay systems for wildlife management. Effective strategies are needed to ensure survival of herpetological communities in the face of multiple human threats, while still addressing the needs of all partners.

INTERNATIONAL OUTREACH

Many US issues are global concerns and PARC is expanding its network to address important conservation topics regardless of geographic region.

CERTIFICATION AND ACCREDITATION

PARC is pursuing opportunities and methods to provide certification in areas such as habitat management, species identification, inventory and monitoring procedures, or environmental ethics to those who complete our training modules. We will also explore opportunities for students to receive university credits or other incentives for attending training courses or for their work on PARC projects.



Landscapes from left to right: Lilly pads, Virginia (John White), Fire Canyon, Nevada (Polly Conrad), Oak savanna, Ohio (Greg Lipps)



Long Leaf Pines in the fog (Jeff Hall)



Special Acknowledgements

Conservation is expensive, and our partners have been there to foot the bill over the last 10 years.

Thank you!

GOLD CONTRIBUTORS (\$500 K - \$750 K):

U.S. Forest Service, U.S. Fish and Wildlife Service

SILVER CONTRIBUTORS (\$50 K - \$150 K):

Department of Defense Legacy Program, National Fish and Wildlife Foundation, National Park Service, Savannah River Ecology Lab (University of Georgia), U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Environmental Protection Agency, U.S. Natural Resources Conservation Service

BRONZE CONTRIBUTORS (\$5 K - \$49 K):

Arizona Game and Fish Department (GFD); Conservation International; Delaware Division of Fish & Wildlife (DFW); Florida Fish & Wildlife Conservation Commission; Georgia Department of Natural Resources (DNR); Illinois DNR, Iowa DNR; International Paper; Kansas Department of Wildlife & Parks; Maryland DNR; Massachusetts Division of Fisheries & Wildlife; Michigan DNR; M.C. Davis; Mead-Westvaco; Missouri Department of Conservation; Nebraska Game & Parks Commission; Nevada Department of Wildlife; New Jersey DFW; New York Department of Environmental Conservation; North Carolina Wildlife Resources Commission; North Dakota GFD; Ohio Division of Wildlife; Oklahoma Department of Wildlife Conservation; Oregon Department of Fish & Wildlife; Pet Industry Joint Advisory Council/Pet Care Trust; South Dakota Game, Fish and Parks Department; Texas Parks & Wildlife Department; U.S. Department of Agriculture Invasive Species Coordination Program; U.S. Geological Survey; Utah Division of Wildlife Resources; Vermont Department of Fish & Wildlife; Virginia Department of Game & Inland Fisheries; Wisconsin DNR

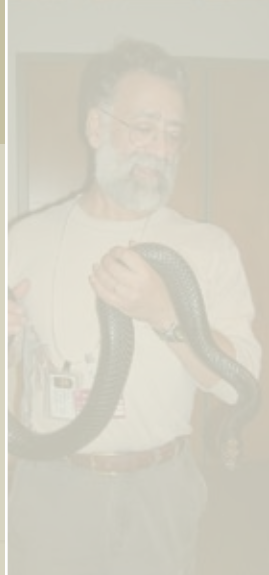
We would like to give special thanks to all other donors who have given smaller, but extremely important contributions toward PARC products and conferences, without whom PARC could not have gotten this far.

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Gila Monster (Christy Klingler)



Whit Gibbons with Snapping Turtle. This photo was taken recently, but Whit first captured and marked this turtle in 1978! He has recaptured it a handful of times over the years. (Judy Greene)





Key Leaders in the First 10-Years-of-PARC

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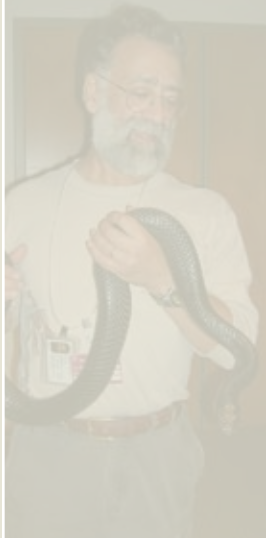
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 Lucas Wilkinson
 J.D. Willson
 Elke Wind
 Rob Wood

We thank the all of the people listed above and the countless others, including past and current Task Team chairs and other supporters, who have contributed their time, efforts, and resources toward PARC endeavors.



Laura Gibbons and Nicholas Harris with an American Alligator (Mike Gibbons)





Red Salamander (J.D. Wilson)





“Amphibians and reptiles play a vital role in the mix that defines earth’s natural diversity, yet they are in jeopardy. PARC’s efforts in its first decade have moved to pull key species from the precipice of extinction. In pursuing its goals into the future, PARC will help preserve a significant component of our natural heritage.”

Dr. E.O. Wilson, Ph.D., Pellegrino University Research Professor, Emeritus, Harvard University



“PARC has energized the herpetological community and provided a context for interaction. The many accomplishments of its first decade hold great promise for the future in stimulating badly needed effective action for amphibian and reptile conservation.”

Dr. David B. Wake, Ph.D., University of California, Berkeley



“PARC has emerged as the paragon of conservation organizations through a resolute alliance of coordinated public and private partnerships. PARC is the only conservation effort in the world to encompass all reptiles and amphibians on national and international levels.”

Dr. J. Whitfield Gibbons, Ph.D., University of Georgia, Savannah River Ecology Lab

