

www.YearoftheTurtle.org

Year of the Turtle News

No. 1

January 2011

Basking in the Wonder of Turtles

Welcome to 2011, the Year of the Turtle!

Turtle conservation groups in partnership with PARC have designated 2011 as the Year of the Turtle. The Chinese calendar declares 2011 as the Year of the Rabbit, and we are all familiar with the story of the “Tortoise and the Hare”. Today, there is in fact a race in progress—a race to extinction, and turtles, unfortunately, are emerging in the lead, ahead of birds, mammals, and even amphibians. The majority of turtle threats are human-caused, which also means that we can work together to address turtle conservation issues and to help ensure the continued survival of these important animals. Throughout the year we will be raising awareness of the issues surrounding turtles through this newsletter, as well as press releases, educational talks, a calendar photograph contest, and other related efforts. Read more in the *State of the Turtle* (right).

Wood Turtle, J.D. Kleopfer



Bog Turtle, J.D. Willson



State of the Turtle Raising Awareness for Turtle Conservation

Trouble for Turtles

The fossil record shows us that turtles, as we know them today, have been on our planet since the Triassic Period, over 220 million years ago. Although they have persisted through many tumultuous periods of Earth’s history, from glaciations to continental shifts, they are now at the top of the list of species disappearing from the planet: 47.6% of turtle species are identified as “Threatened” worldwide. Their plight is part of the ongoing worldwide loss of biodiversity, with about 30% of amphibians, 25% of mammals, and 12% of birds in similar straits. Conservation action can successfully slow or reduce this trend for turtles, however. The “2011 Year of the Turtle” (see below) is an opportunity to raise awareness of the issues, and ideally, to initiate new and increase existing conservation actions that can successfully slow or reduce the problems that turtles face. Because this group can respond well to population management and conservation, it is not too late to preserve our turtle heritage.

Our Natural Heritage of Turtles

While turtles (which include tortoises) occur in fresh water, salt water, and on land, their shells make them some of the most distinctive animals on Earth. Turtles are so unique that some scientists argue that they should be in their own Class of vertebrates, Chelonia, separate from reptiles (such as lizards and snakes) and other four-legged creatures.

The longevity of turtles has made their stature iconic in many world cultures. Turtle folklore is abundant, with turtles often depicted as wise and determined. In many ancient stories from diverse places, from

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River Cooter, J.D. Willson

“Behold the turtle. He makes progress when his neck is out.” — James Bryant Conant (1893-1978), educator and scientist

Year of the Turtle Planning Team Partners

Partners in Amphibian and Reptile Conservation (PARC) is an inclusive partnership of government, non-profit, industry, academic, and private citizen members dedicated to the conservation of amphibians and reptiles and their habitats. PARC was created to help connect and complement local, regional, and national herpetofaunal conservation efforts, and focuses on all species of herpetofauna. This diversity of partners and breadth of species coverage makes PARC the most comprehensive conservation effort ever undertaken for amphibians and reptiles. <http://www.parcplace.org>



The **IUCN/SSC Tortoise and Freshwater Turtle Specialist Group** is one of the more than 100 Specialist Groups and Task Forces that constitute the working network of the IUCN Species Survival Commission (SSC). Their mission is to identify and document threats to the survival of all species of tortoises and freshwater turtles, and to help catalyze conservation action to ensure that none become extinct and that sustainable populations of all species persist in the wild. <http://www.iucn-tftsg.org>

The **Turtle Conservancy** is a nonprofit scientific and educational organization “for the conservation of turtles and tortoises around the world.” Since 2005 the Conservancy has supported a highly successful breeding program at the Behler Chelonian Center along with many other in-situ research projects, adding to knowledge of chelonians. <http://turtleconservancy.org>



The **Turtle Survival Alliance (TSA)** was formed as an IUCN partnership for sustainable captive management of freshwater turtles and tortoises. The mission of the TSA is “transforming passion for turtles into effective conservation action through a global network of living collections and recovery programs.” <http://www.turtlesurvival.org>

The **U.S. Fish and Wildlife Service** is a bureau within the U.S. Department of the Interior. Our mission is to work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people. <http://www.fws.gov>



The **Virginia Herpetological Society (VHS)** brings together people interested in advancing their knowledge of Virginia’s reptiles and amphibians. The VHS encourages scientific study of Virginia herpetofauna and its conservation and education. <http://www.virginiaherpetologicalsociety.com>

Collaborating Partners

The **AZA Chelonian Taxon Advisory Group (TAG)** examines the conservation needs of chelonians (turtles) and develops recommendations for population management and conservation based upon the needs of the species and those of AZA-accredited institutions. The Chelonian TAG develops action plans that identify essential goals, scientific investigations, and conservation initiatives needed to best serve ex situ and in situ turtle populations. <http://www.aza.org>



The Global Wildlife Trust, Inc. (GWT) d.b.a. **Catocтин Wildlife Preserve and Zoo** is dedicated to broadening human understanding of the animal world through the public’s immersion in naturalistic habitat recreations and educational programs. This year they are excited to announce the “Turtles Forever -1,001 Turtles” exhibit, open from May through October in support of Year of the Turtle. <http://www.cwpzoo.com>

More Year of the Turtle Collaborating Partners



The **Centre for Coastal Environmental Conservation (CCEC)** is a grassroots, local environmental non-governmental organization based in Khulna, Bangladesh, that works toward the protection and sustainable management of coastal ecosystems in Bangladesh. CCEC's goal is to save coastal communities from sea level rise and global climate change by involving local coastal people in grassroots efforts to promote and enact environmental protection strategies. <http://www.ccecbd.org>

The **Center for North American Herpetology** serves as a data bank for information about North American amphibians, turtles, reptiles, and crocodylians, and promotes research on them by financial support of selected publications, photography, and any other appropriate medium, as well as the establishment of awards for excellence in research about these fascinating creatures. <http://www.cnah.org>



Chelonian Research Foundation is a nonprofit organization founded in 1992 for the production, publication, and support of worldwide turtle and tortoise research, with an emphasis on the scientific basis of chelonian diversity and conservation biology. <http://www.chelonian.org>

Forgotten Friend Reptile Sanctuary is based out of Lancaster County, Pennsylvania and focuses on reptile rescue and educational outreach. Since 2004 they have teamed up with animal shelters and authorities to find better homes for thousands of unwanted or abandoned pet reptiles and amphibians. Their mission can be boiled down to one simple idea: Give Reptiles a chance! <http://www.forgottenfriend.org>



The **Georgia Department of Natural Resources (DNR)** comprises six divisions that carry out DNR's mission to sustain, enhance, protect, and conserve Georgia's natural, historic and cultural resources. As one of six divisions within DNR, the Wildlife Resources Division (WRD) is charged with conserving, enhancing, and promoting Georgia's wildlife resources, including game and nongame animals, fish, and protected plants. <http://www.georgiawildlife.com>

The **German Chelonia Group** involves itself on national and international levels in the conservation of chelonians, including their proper husbandry and propagation in human care. The German Chelonia Group facilitates the exchange of experience and contacts amongst people with the same field of interest, for example, on the occasion of the annual general meeting or through regional workshops. <http://www.radiata.de>



HerpDigest is the only free weekly electronic newsletter that reports on the latest news on herpetological conservation, husbandry and science—all delivered to your email twice a week. <http://herpdigest.org>

The **Terrapin Institute** began in 1998 as a consortium of concerned citizens, scientists, resource managers, and educators dedicated to the understanding, persistence, and recovery of Diamondback Terrapins and other turtles through effective management, thorough research, and public outreach. They work to protect an abundance of adult turtle populations, preserve nesting and forage habitat, and improve recruitment. <http://www.terrarinstitute.org>



The **Turtle Conservation Fund (TCF)** is a strategizing and funding coalition of leading turtle conservation organizations and individuals focused on ensuring the long-term survival of tortoises and freshwater turtles. The TCF mission is "to ensure that no species of tortoise or freshwater turtle becomes extinct and that sustainable populations of all species persist in the wild." <http://www.turtleconservationfund.org>

More Year of the Turtle Collaborating Partners



Turtle Talk Rescue, Inc. is dedicated to the care of abandoned, injured, and unwanted turtles and tortoises in the Northwest U.S. Since its beginnings in 2001, Turtle Talk Rescue has taken in hundreds of turtles and tortoises for care. Their Education Program takes the message of “responsible pet ownership” to schools, daycares, summer camps, and animal venues. <http://www.turtletalkrescue.com>

The **Turtle and Tortoise Preservation Group (TTPG)** works on conservation of turtles using captive breeding. The TTPG is involved with the dissemination of information about the world’s turtles and tortoises and their proper care. TTPG has also been the proud host of Turtle Night at the National Reptile Breeders Expo for ten years and recently hosted their first annual Conference on Captive Care and Breeding of Turtles and Tortoises in Phoenix, Arizona in November.

<http://www.ttpg.org>



TURTLE and TORTOISE
PRESERVATION GROUP

Our list of partners continues to grow each day. If you are interested in contributing to the Year of the Turtle efforts, please send an email to yearoftheturtle2011@gmail.com with a brief description of your organization and its efforts.

All Year of the Turtle partners are encouraged to use the Year of the Turtle logo, News, and website to announce and promote turtle conservation and awareness activities. However, all activities are not necessarily endorsed by PARC or other Year of the Turtle partners.

U.S. Fish and Wildlife Service Holds Freshwater Turtle Workshop

The U.S. Fish and Wildlife Service's (USFWS) International Wildlife Trade Program convened a freshwater turtle workshop in St. Louis, Missouri in September 2010. The purpose of the workshop was to discuss the pressing management, regulatory, scientific, and enforcement needs associated with the harvest and trade of freshwater turtles in the United States. The USFWS has responded to a significant increase in the export of native turtles and concerns expressed by the conservation community about this issue.

The Association of Fish and Wildlife Agencies, along with almost three dozen states, joined a small number of government, academic, and conservation group turtle researchers, as well as USFWS representatives, for this four-day workshop. The IUCN Tortoise and Freshwater Turtle Specialist Group served as a technical advisor to the meeting. The USFWS has set up an e-mail listserv to discuss the same areas of concern as the workshop and plans to have a webpage on the workshop's results up and running soon. Watch for more information in our next newsletter, and be sure to visit www.fws.gov for the upcoming webpage launch.

Sonoran Desert Tortoise Added to ESA Candidate List



Ken Nagy

The U.S. Fish and Wildlife Service (USFWS) recently announced a 12-month finding on a petition to list the Sonoran population of the desert tortoise (*Gopherus agassizii*) as endangered or threatened and to designate critical habitat under the Endangered Species Act of 1973. Following a review of all scientific and commercial information, the USFWS has determined that listing the Sonoran population of the desert tortoise is warranted. Currently, however, listing the Sonoran population is precluded by higher-priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. The USFWS will add the Sonoran population to the candidate species list and will develop a proposed rule to list the Sonoran population as priorities allow. Determination on critical habitat will be conducted during development of the proposed listing rule. Look for more information at the Southwest PARC Annual Meeting in Tucson, Arizona in August.

Call for Photos for the 2011 Year of the Turtle Calendar Photo Contest

We are seeking close-up, digital photos of turtles, preferably in their natural habitats or within an educational or conservation context. One winner will be selected each month to be the featured photo in the Year of the Turtle online calendar. Runner-up photos will also be included in the calendar. Additionally, all submitted images will be considered for use in the Year of the Turtle monthly newsletter and website as well as other Year of the Turtle related conservation, outreach, and educational efforts. Give us your best shot! For more information and for entry details, please visit www.yearoftheturtle.org.



This *Glyptemys insculpta* hatchling was photographed while emerging from a nest on August 11, 2010 in Virginia by Steven Krichbaum.

This month's calendar photo contest winner, **Steven Krichbaum**, is a PhD student at Ohio University. His research interests include the ecology and conservation biology of Wood Turtles (*Glyptemys insculpta*) in Virginia and West Virginia.

Take a look at some of the many other outstanding photos submitted so far!



Hatchling *Chelydra serpentina* (Snapping Turtles), by Simon Pelletier



Basking *Pseudemys gorzugi* (Rio Grande Cooters) by Troy Hibbitts



Download the January Turtle Calendar to see the Photo Contest winner (and runner-up) at www.yearoftheturtle.org.



From top: *Emydoidea blandingii* (Blanding's Turtle) by Melanie Foose; Box Turtles (*Terrapene carolina*), by Sam Bland; Cooters (*Pseudemys concinna*) by Tom Gillespie.

Follow all of the Year of the Turtle news and happenings on **Facebook** (<http://www.facebook.com/pages/Year-of-the-Turtle-2011/158410367533653>) and **Twitter** (<http://twitter.com/YearOfTheTurtle>).

Update on World Turtles!

The following article summarizes turtles of the world, and their draft IUCN Red List status determinations and CITES listings.

Turtle Taxonomy Working Group [Rhodin, A. G. J., P. P. van Dijk, J. B. Iverson, and H. B. Shaffer]. 2010. *Turtles of the world, 2010 update: annotated checklist of taxonomy, synonymy, distribution, and conservation status*. In: Rhodin, A. G. J., P.C. H. Pritchard, P. P. van Dijk, R. A. Saumure, K. A. Buhlmann, J. B. Iverson, and R. A. Mittermeier (Eds.). *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*. Chelonian Research Monographs No. 5, pp. 000.85-000.164, doi: 10.3854/crm.5.000.checklist.v3.2010.

Available at: http://www.iucn-tftsg.org/wp-content/uploads/file/Accounts/crm_5_000_checklist_v3_2010.pdf

State of the Turtle, 2011 (continued from p. 1)

Eastern Box Turtle, J.D. Willson



America to Asia, it is believed that we live on the back of a turtle. Turtles also frequently appear in recent stories such as children's books and animated movies, often portrayed as gentle creatures helping others through their problems. Many people can recall specific instances of seeing turtles in the wild as children. It is clear that turtles are an important symbol of the connection between people and nature.

Turtles are ecologically important. They occupy a central node in food webs. For example, in the eastern and southern United States, the Diamondback Terrapin is an essential member of salt marsh ecosystems where it feeds upon periwinkle snails which in turn feed on cord grass (*Spartina*). Terrapins are part of the balance of nature in those marshes.

Turtles also are important to people for a variety of personal uses. They are our pets and in many diverse cultures worldwide, they are sources of food. In some places, they are used for traditional medicines. Seeing a turtle in the wild, basking or on a trail, gives joy and wonder.

A Growing Need for Attention

The United States has more native turtle species than any other country; it is a turtle biodiversity hotspot. In the last 30 years, however, many turtle species have become imperiled.

Currently, 328 species of turtles are known worldwide, with 57 species in the United States and Canada. The Red List of the International Union for the Conservation of Nature (IUCN), the official list of the conservation status of the world's animals, lists 47.6% of living turtle species as Threatened. If we expand our view to 'modern' turtles (all species that are known to have occurred in the last 400 years), then 50% are extinct or threatened with extinction. This level of threat is greater than that of all other well-known species groups.

Quick Turtle Facts:

- Over 40% of freshwater turtles species are threatened, worldwide. That is more than any other animal group.
- North America is a turtle biodiversity hotspot, home to nearly 20% of all known turtle species.

Slow Growth Means Fast Problems

As characterized by the story of the Tortoise and the Hare, turtles are typically slow creatures. This isn't limited to their speed; they also grow slowly. It may take 10-15 years before individuals of some species can reproduce. A thriving turtle population relies on turtles surviving many years, if not decades. But if a population loses adults and begins

to decline, a slow recovery can be expected. Because of these 'slow' characteristics, the primary threats to turtles are intensified.

Primary Threats

Habitat loss and degradation—Many turtles have small distributions, in other words, they are found only in a few locations. This heightens their risk of losses when habitat changes occur. Habitat of freshwater turtles includes both the surface waters where they live and the surrounding land where they nest. These areas can be subject to many types of human alteration, such as wetland drainage or water diversions. When the habitat of more widespread species is lost or degraded (because of land development or other land uses), larger populations become isolated and places to feed, mate, or nest become harder to find. Over a relatively short time, this can lead to population declines of 'common' species. Even large populations can be affected in short order. Habitat degradation can take many forms, and can include chemical pollution for some species. Oil spills can affect both sea and freshwater turtles. For sea turtles, city lights interfere with orientation; this is another form of habitat alteration adversely affecting these animals.

Western Pond Turtle, Garth Hodgson





Diamondback Terrapin, J.D. Willson

Overexploitation of wild turtles for food, traditional medicines, and pets—Turtles that are removed from the wild for food, used as medicines, or as pets can contribute to population declines. When a large number of individuals are removed, the remaining wild turtles cannot produce enough offspring quickly enough to recover and maintain a healthy population.

People have been using turtles as food, medicines, and pets for thousands of years – this is not new. However, a rapidly growing human population of over 6 billion people has created an unprecedented increase in these uses. An estimated 300 million turtles are consumed each year in Asia alone. The impact of overexploitation of wild turtles is a growing concern worldwide because it has exceeded the capacity for native wild turtle populations to recover. A phenomenon known as the “Asian Turtle Crisis” is a direct result of overharvest – most native Asian turtles are nearly extinct in the wild due to overexploitation.

Recent concerns for North American native turtles are just an extension of this Crisis. In the 2000s, it is estimated that 12-20+ million US turtles were shipped overseas per year. Although many of these came from US turtle farms, and turtles sometimes can be successfully farmed to meet commercial demands in a sustainable way, some of these turtles

came from the wild. Compounding the problem, wild turtles often are valued more than farmed turtles in some markets, and illegal or ‘black market’ trade of turtles, including rare and highly threatened species, continues to increase. There is a growing concern that commercial demand could increasingly affect North American wild turtle populations. However, commercial exploitation of wild turtles has not been well-studied, and so the number of wild turtles harvested per year is not clearly known.

Primary Threats to Turtles:

- Habitat loss
- Overexploitation

Other Threats

Mortality from roads, agricultural machinery, fishing bycatch, and predators—Slow-moving turtles often are victims to fast-moving cars or agricultural machinery. In addition, when they are unintentionally caught underwater in fishing nets, they may drown before they can escape or be removed. Predators also can threaten turtle populations, particularly those that prey on turtle nests and are increasing in numbers as they capitalize on the bounty created by human-disturbed landscapes (for example, raccoons).

Invasive species and diseases—When non-native (exotic) animal species come into contact with native turtle species, they can compete for food and other resources. Some introduced animals are predators on turtles or carry diseases affecting turtles. Non-native plants can alter

habitats where turtles live by changing the availability of their food, water, nesting sites, or shelter.

Climate change—In combination with the above threats, a changing climate can alter many aspects of a turtle’s life cycle. Altered temperature and rainfall patterns can affect where sources of food and water are found, or suitable nesting sites. Entire wetlands can be lost. If turtles move elsewhere to find these resources, they are likely to encounter other risks such as roads and other hazards that can lead to their demise.

A peculiarity of many species of turtles is that the sex of an individual hatchling is determined by the temperature of the nest. If turtle nests become too hot or too cold, then only one sex is produced. If that trend were to continue over time, reproduction would be reduced significantly. Turtle scientists now are trying to understand how global warming might interact with this odd trait of turtles. With all of the above threats, and with the unprecedented pace of change in climate features (temperatures, rainfall, extreme weather conditions), turtles may not be as resilient to changing climates today as they have been in their long history on Earth.



Chicken Turtle hatchling, J. Mitchell

Conservation Actions for Turtles

We can reduce or prevent the decline of turtles, especially with a focus on most species in North America. Three basic approaches for species conservation include:

1. protecting rare species and their habitats,
2. managing common turtle species and their habitats so that they remain common, and
3. managing crisis situations, such as species in peril from acute hazards such as oil spills.

2011 — Year of the Turtle

To raise awareness for the plight of turtles and tortoises, the Partners in Amphibian and Reptile Conservation (PARC) and their collaborators have designated 2011 as the Year of the Turtle. Through outreach efforts to researchers, educators, natural resource managers, and the public, the Year of the Turtle campaign aims to increase US national involvement in local-to-national turtle issues. International outreach is extending Year of the Turtle efforts to a broader range of participants worldwide. In 2011, a monthly newsletter will highlight ongoing efforts. Visit www.yearoftheturtle.org for more information.

Important progress is being made already with our US turtle heritage. The freshwater turtle science



Spotted Turtle, J. White



Texas Map Turtle, Troy Hibbitts

and conservation community, in conjunction with US state and federal wildlife agencies, recently developed recommendations for managing freshwater and land turtle populations. These recommendations include better monitoring and tracking of turtle harvests, as well as the need for more long-term population studies on wild turtles. This new guidance is intended to draw more attention to emerging US turtle concerns. In addition, a new effort is underway to better understand the current distribution of turtles. This Turtle Mapping Project begins in January 2011 (see <http://www.parcplace.org/yotmapping.htm>).

Basking in the Future Possibilities

After more than 200-million years on Earth, many turtle populations suddenly are facing extinction. However, we must look forward and develop strategies to assist these important creatures; only decisive actions can turn this trend around. In 2011, turtle conservation groups will be raising awareness of the issues surrounding turtles, and both private citizens and governments worldwide will become engaged to develop solutions. The scope of the problem will rely on government policies as well as personal efforts at specific locations for specific species. Citizens, natural resource managers, scientists, and the pet and food industry can

come together to help steer a course toward the long-term survival of our amazing turtles. Our work today, together, can keep turtles, and our connections to them, with us for generations to come.

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²The Turtle Conservancy, John L. Behler Chelonian Center; ross@turtleconservancy.org

State of the Turtle available online at <http://www.parcplace.org/YOTStateoftheTurtle.pdf>

Key Reference: Turtle Taxonomy Working Group [Rhodin, A.G.J., P.P. van Dijk, J.B. Iverson, and H. B. Shaffer]. 2010. Turtles of the World, 2010 Update: Annotated checklist of taxonomy, synonymy, distribution, and conservation status. *Chelonian Research Monographs* 5:85-164. Available at: <http://www.iucn-tftsg.org/checklist/>



Gopher Tortoise, D. Stevenson

You Can Participate

Submit your citizen science projects

A compilation of turtle citizen science/volunteer inventory and monitoring projects is ongoing. Some of these will be featured in our monthly newsletters. Send any information on these types of projects to yearoftheturtle2011@gmail.com.

USA Turtle Mapping Project

Many US freshwater turtles and tortoises are little-studied and basic ecological information is lacking, including where they occur. In 2011, a national effort will be launched to compile new and existing locality data for US turtles and tortoises, with a focus on selected species. These are not always the rarest species but include common species which could easily go the way of the extinct Passenger Pigeon from unmonitored 'take' or habitat degradation. In collaboration with the International Union for the Conservation of Nature (IUCN) Freshwater Turtle Specialist Group, a subset of US species has been identified for which distributional information is critically needed to better gauge their conservation status. Our focal species at this time include:

- Diamondback Terrapin (*Malaclemys terrapin*)
- Red-eared Slider (*Trachemys scripta elegans*)
- Gopher tortoises (*Gopherus* species)
 - Desert Tortoise (*G. agassizii*)
 - Texas Tortoise (*G. berlandieri*)
 - Gopher Tortoise (*G. polyphemus*)
- Snapping Turtle (*Chelydra serpentina*)
- Box turtles (*Terrapene* species)
 - Eastern Box Turtle (*T. carolina*; especially *T. c. carolina*)
 - Ornate Box Turtle (*T. ornata*)
- Painted Turtle (*Chrysemys picta*)
- Western Pond Turtle (*Actinemys marmorata*)

You can participate in this effort by submitting turtle and tortoise localities on our forms (available at <http://www.parcplace.org/YOTTurtleLocalityDataTemplate.xls>) to yearoftheturtle2011@gmail.com. Please note that there are both required and optional data columns on these forms. We would like to thank you in advance for your efforts to fill out the required data elements (species identification, date of observation, location, your name and contact information), and to provide a digital photo when possible.



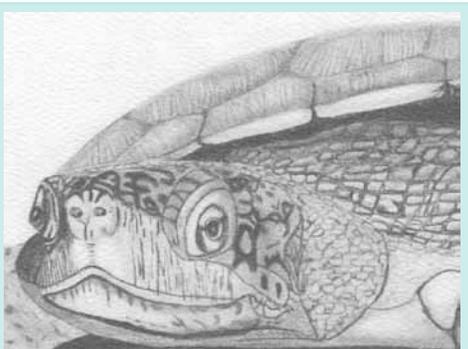
Kimberly Barela (see photo) is a student intern at Oregon State University, Corvallis, who will be working with Dede Olson (US Forest Service, Pacific Northwest Research Station; National Co-Chair of PARC) to compile these forms and develop distribution maps of these species. If you would like to help with data compilation or mapping in your area, please contact Dede: dedeolson@fs.fed.us

Another way that local turtle enthusiasts, schools/classes, or conservation groups may participate in this effort is to conduct a local 'bioblitz' to collect new turtle or tortoise distribution information. Please check with state laws regarding permits that may be needed if you plan to handle or trap these species, and be aware that you cannot go onto others' lands without their permission. And of course, Safety First!

Turtles in the News

Chris Tabaka, veterinarian at the Binder Park Zoo in Battle Creek, MI, discusses the road to recovery for turtles following Enbridge Inc.'s oil spill into the Kalamazoo River in July 2010. Read the full story at http://www.mlive.com/news/kalamazoo/index.ssf/2010/12/veterinarian_discusses_rescues.html.

If you have items to contribute to Turtles in the News, please send links to newsletter editor David Dimitrie at yearoftheturtle2011@gmail.com.



Western Pond Turtle. Pencil drawing by Dede Olson, from a photo by Garth Hodgson.

Submit your turtle art, stories, and poetry

Submit your turtle art (in jpg, tiff, or pdf format) and copies of your stories and poems via email to yearoftheturtle2011@gmail.com. Please include your name, location, and any comments about the submission in your email message. We will select several submissions to include in upcoming newsletters.

An Interview with: Dr. Carl Ernst

by Thomas Leuteritz



Dr. Carl H. Ernst, whose 2nd edition of *Turtles of the United States and Canada* came out in 2009, was interviewed at the Smithsonian National Museum of Natural History on December 15, 2010.

How did you become interested in studying turtles and at what age did your interest in these shelled reptiles start?

I began very early, probably 7 or 8 years old. We had a cabin along the Susquehanna River and there were a lot of box turtles and wood turtles there and I got started—well, you know—playing with them, collecting them and taking the box turtles home to live in my backyard. That is really where I got started. I've branched out from there of course.

In your opinion what is the biggest conservation issue facing turtles given the myriad threats out there today?

The biggest thing facing everything environmental is overpopulation [of humans]. As we become overpopulated the demand for materials, food, water, and so on, and space particularly dictates that

we enter into the wild realm and basically mess up the habitats and ecosystems there and that, I think, is the biggest thing. If we can control the human population and then get a handle on how to better conserve and manage our turtle populations and other wildlife populations we will be a lot better off. Second to overpopulation is global warming. If, as predicted, the surface temperature of Earth increases 2-4 °C, it will skew the sex ratios of all temperature sex-determinate turtles. This could result in very quick extinction of many species, and certainly alter existing distributions.

What is your favorite turtle or group of turtles?

My favorite group of turtles is the family Emydidae [the family of North American freshwater turtles], where I like to specialize on the semi-aquatic and aquatic species like the painted turtle—which I did my doctoral work on—and the spotted turtle, *Clemmys guttata*. These are probably my two favorite turtles.

Blanding's Turtle, Emydoidea blandingii. Photo by Daniel Fogell



Given 2011 has been designated the Year of the Turtle, how can people be made aware of importance of turtles and the role they play in our ecosystems?

I think we probably need to have National Geographic and PBS and a few of the others do some programs on it. Also, some web exposure and articles in conservation magazines, semipopular ones; what is needed is to get the public behind you in the conservation efforts before a lot of these species disappear. The answer is to educate the general public on the plight and perils of our turtles. The public is, as a whole, fond of turtles, and may respond accordingly.

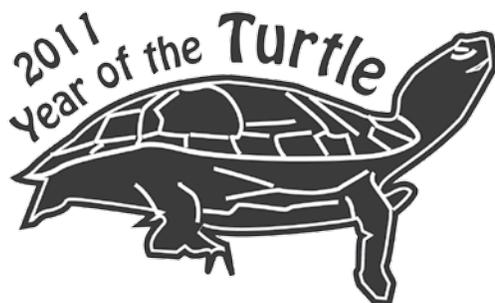
What guidance on turtle conservation do you have for policy makers, landowners, and politicians?

My biggest emphasis has always been that in order to have a conservation plan, a real suitable one that works, you have to know the life history of the animal. We really require additional basic studies on the needs, ecological, behavioral, and physiological, of these animals. Once we understand these needs, then we can make great strides in conserving our turtles.

The views and opinions of interviewees are not necessarily shared by all members of PARC or other Year of the Turtle Partners.

Ask the Experts!

Submit your turtle questions via email (yearoftheturtle2011@gmail.com) to our panel of experts, and we will select a few questions to answer in an upcoming newsletter. Please include your name and location in your email message.



The Year of the Turtle Gets Official Logo



The Year of the Turtle logo was created by Kelly Christiansen of Corvallis, Oregon. In October and November 2010, we solicited logos from the PARC membership and our developing turtle conservation partners. We held a vote of the top six logos received, and Kelly's pond turtle silhouette was the winner! Kelly is a GIS analyst for the U.S. Forest Service, Pacific Northwest Research Station. He is also an avid Disc Golf player. He initially created the logo to submit as a candidate for the Calapooia Classic Disc Golf Tournament in Albany, Oregon, as there are Western Pond Turtles at the park where the tournament is held. We thank Kelly for his appreciation of this iconic piece of Oregon's natural heritage, and for his keen insight to try to incorporate it into his sport. We also thank Kathryn Ronnenberg, graphic arts specialist who works with Kelly at the Pacific Northwest Research Station, for her edits to the turtle graphic. The result is our national logo for 2011!



Translation Help Wanted

We are looking for volunteer translators to help us create versions of the **State of the Turtle** document in Spanish and other languages. If you are fluent in a language other than English and can help, please contact Dede Olson at dedeolson@fs.fed.us. Translations will come back to us for layout, then be posted on www.yearoftheturtle.org alongside the English version of the document. Help us make State of the Turtle accessible to all!

Actions to Consider

Don't Turn It Loose! Releasing pet turtles into the wild can be detrimental to populations of turtles and the ecosystems they depend on to survive. Introduced turtles can transmit harmful pathogens and parasites to other turtles, can increase competition with resident turtles for resources, and can even prey upon resident turtles. Instead of releasing unwanted pet turtles into the wild, consider one of the following alternatives:

1. Donate the turtle to a local nature science center, school, natural history museum, turtle organization, zoo, or aquarium,
2. Give the turtle to another turtle enthusiast to care for, or
3. Return the turtle to the location where you purchased it.

Check back next month for more ways you can help turtles!

Are you an educator or interpretive naturalist?

We want to create a resource page on our website for teachers and naturalists! If you are willing to share, please send your unit materials, educational program information, or PowerPoint presentations to yearoftheturtle2011@gmail.com. Please include your name, the name of your school/nature center or organization, and location. If you did not create the materials, please be sure to tell us where you found them.

PARC Regional Working Group Spotlight: Herpetofauna and Culture – Notes from the Northwest PARC Intern, Joshua Ream

While many dismiss the northernmost stretches of our section as depauperate of herpetofauna, the herpetologists among us in the region recognize that several native species claim the north as their home and in many cases occur in relative abundance. Alaska in particular is habitat to at least six species of native amphibians. Due to the state's vast, sparsely populated wilderness, the financial and logistical challenges of studying these species are great. Baseline data is fragmented and largely absent for the taxonomic group as a whole. For this reason my research explores alternative methods of data acquisition under the dissertation title "Herpetology in the North: a multifaceted approach to non-game research."

I am interested in the integration of Traditional Ecological Knowledge (TEK), Local Ecological Knowledge (LEK), and Citizen Science (CS) in order to access additional resources that have historically been under-recognized and under-utilized. As part of my doctoral research, I am working closely with the Kiksadi clan of the Tlingit Indians, with the people of Wrangell who inhabit a biodiversity hotspot in the state, and with recreational users of the Tongass National Forest. I believe that stakeholder groups such as these may hold the keys to the future of herpetology and conservation.

I am also currently completing an internship with Northwest PARC. In this capacity I have been working closely with the section's chair, Elke Wind, to develop the section's contribution to the Year of the Turtle, with particular emphasis on building relationships with Native Americans and First Nations in the region.

Both Alaska and British Columbia see occasional occurrences of sea turtles while only the latter is home to terrestrial turtles. Throughout the semester I have been reaching out to First Nations, educators, and various community groups in an effort to provide turtle-related materials, to promote Year of the Turtle, establish partnerships and recruit citizen scientists. This has been an incredibly rewarding pursuit that has permitted me to conduct a traveling lecture series for school children and to establish relationships with Project Wet and Project Wild for longer-term turtle curriculum integration.

Though amphibians are the focus of my research in Alaska, turtles will always have a place in my heart. My master's research with the Alligator Snapping Turtle at Austin Peay State University in Tennessee solidified this bond and it has been an honor to participate in the Year of the Turtle. While the academic semester has come to an end, my work with PARC is far from over. I plan to continue to support the organization's mission, and I will serve in 2011 as the chair of the Alaska Chapter. I invite students and researchers to consider herpetological research in the north, where the opportunities are limitless. Please feel free to contact me with questions regarding my own research or my work with Year of the Turtle.

Joshua Ream is a doctoral student in the Applied Ecological Anthropology program at the University of Alaska – Fairbanks and a fellow of the National Science Foundation's Resilience and Adaptation Program. He can be reached at jtream@alaska.edu.



Josh and an old friend.

Acknowledgments



David Dimitrie is engaged in many facets of the Year of the Turtle, including serving as the Year of the Turtle News Editor. He is also involved with communications among Year of the Turtle partners and serves as a member of the Year of the Turtle Calendar Photo Contest Committee. David recently earned his M.S. at Southern Illinois University, where his research focused on the effects of insecticides on California amphibians.

Kathryn Ronnenberg will be taking a monthly break from her work on mapping the occurrence of amphibian chytrid fungus to lay out the Year of the Turtle News, the photo contest calendar, and whatever other



documents arise from a year's focus on turtles (the State of the Turtle report, for example). A Research Assistant with the U.S. Forest Service Pacific Northwest Research Station, she edits and produces graphics for publications on everything from hydrology to herpetology.

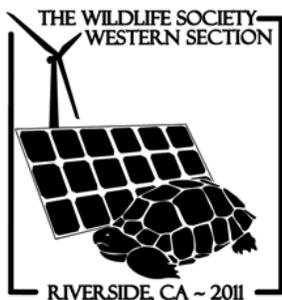
Dr. J.D. Willson deserves a pat on the back for his extra efforts in managing our Year of the Turtle webpage (www.yearoftheturtle.org) in addition to the PARC website (www.parcplace.org). J.D. is a modern-day renaissance herpetologist: he has expertise with a variety of taxa and topics; he is a well-published author and talented photographer; he has a demonstrated love of the outdoors and



all aspects of nature; and he has been excellent to work with regarding these websites, particularly when it comes to trouble-shooting. He earned his Ph.D. in 2009 from the University of Georgia, Savannah River Ecology Lab and is currently a post-doc at Virginia Tech with the Wildlife Ecotoxicology and Physiological Ecology Program. There he is examining the effects of chemical contaminants on amphibian populations. He has also worked with Burmese Pythons, as shown above. We are truly grateful that he donates some of his time and skills to herpetological conservation efforts! Read more about J.D.'s multiple accomplishments here: <http://www.ecophys.fishwild.vt.edu/JDWillson.html>

Upcoming Meetings and Events

The Wildlife Society, Western Section. February 8-11, Riverside, California. Note their new logo:



The Wildlife Society, Oregon Chapter, Bend, OR. February 9-11, Bend, Oregon. Ross Kiester is the banquet speaker, talking turtles!

Southeast PARC Annual Meeting, "Reptile and Amphibian Conservation Southern Style" February 17-20 at Lake Tiak O'Khata, Louisville, Mississippi.

76th North American Wildlife and Natural Resources Conference March 14-19 in Kansas City, Missouri.

Association of Zoos and Aquariums Mid-Year Meeting March 19-24 in Chattanooga, Tennessee.

Northwest PARC Annual Meeting March 21-22 in Gig Harbor, Washington.