

www.YearoftheTurtle.org

Year of the Turtle News

No. 9

September 2011

Basking in the Wonder of Turtles

Taking Action for Turtles: Year of the Turtle Federal Partners Work to Protect Turtles Across the U.S.

Last month, we presented a look at the current efforts being undertaken by many state agencies across the U.S. in an effort to protect turtles nationwide. Federal efforts have been equally important. With hundreds of millions of acres of herpetofaunal habitats under their stewardship, and their many biologists and resource managers, federal agencies play a key role in managing turtle populations in the wild, including land management, supporting and conducting scientific studies, and in regulating and protecting rare and threatened turtles and tortoises. What follows is a collection of work being done by federal agency partners to discover new scientific information and to manage turtles and tortoises across the U.S. — *Terry Riley, National Park Service, PARC Federal Agencies Coordinator*

Alligator Snapping Turtles at Sequoyah National Wildlife Refuge*, Oklahoma

The appearance of an Alligator Snapping Turtle (*Macrochelys temminckii*) is nearly unforgettable – the spiked shell, the beak-like jaw, the thick, scaled tail, not to mention the unique worm-like appendage that lures their prey just close enough to become a meal. In eastern Oklahoma, this unique species was once relatively

common and distributed throughout all of the area's major river systems. Current populations have declined dramatically and now are restricted to a few remote or protected locations. Habitat alterations and overharvest have likely contributed to their declines. Sequoyah National Wildlife Refuge boasts one of the healthiest populations in the state. Over the past 15 years, the refuge has served as an important study area, producing insights into their

habitat use, distribution, home range, and age structure. Currently, the refuge collaborates with Alligator Snapping Turtle researchers from Oklahoma State University, Missouri *More Federal Turtle Projects on p. 8*



Graduate Researcher Mitchell East, Missouri State University, Department of Biology, handles an adult Alligator Snapping Turtle. Photo by Darren Riedle.

*The National Wildlife Refuge System is staffed and administered by the U.S. Fish and Wildlife Service, Dept. of the Interior.



A 31 pound Alligator Snapping Turtle (*Macrochelys temminckii*) captured at Sequoyah National Wildlife Refuge, Sequoyah County, Oklahoma. Photo by Eric Johansen.

Inside:	page
Year of the Turtle Partners	2
An Interview with James Gibbs	3
Turtles in the News	4
Turtle Foundation	5
Marine Turtle Conservation	6
Citizen Science Programs	7
Turtle Spotlight	15
Turtle Mapping	16
Meet the YoT Team: Terry Riley	17
R. Bruce Bury & Turtles	18
SWPARC Regional Spotlight	19
Turtle Talk	20

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

Get Your September Calendar!



Andy Adams photographed this newly-hatched Loggerhead Sea Turtle (*Caretta caretta*) making a break for the water on Bald Head Island, North Carolina. Get a better look at this month's winner and runner-up by downloading your calendar at parcplace.org/images/stories/YOT/YearoftheTurtleCalendarSeptember.pdf

And it's STILL not too late to enter the 2011 Calendar Photo Contest! We are accepting entries all year long. Give us your best shot! For more information and for entry details, please visit www.parcplace.org/news-a-events/224.html.

Turtle Art, Stories, and Poetry

Do you have turtle art, stories, or poetry that could be highlighted during the Year of the Turtle? Submit your turtle art (in jpg, tiff, or pdf format) and copies of your stories and poems via email to yearoftheturtle2011@gmail.com. We will be including submissions in upcoming newsletters and in other Year of the Turtle materials and outreach efforts throughout 2011, and we want your work to be part of it!

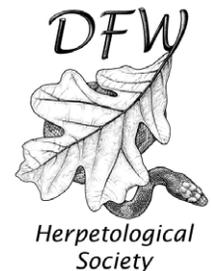
September Collaborating Partners

The Year of the Turtle Planning Team is pleased to welcome the following organizations to our growing list of collaborating partners.



Alabama Department of Transportation (ALDOT) is active in two initiatives to preserve and assist in the propagation of Gopher Tortoises and the Alabama Red-bellied Turtle (*Pseudemys alabamensis*). ALDOT received the 2009 Regional Director's Conservation Award from the U.S Fish and Wildlife Service for its continued efforts in the recovery of fish and wildlife resources in Alabama, including establishing an 800-acre conservation bank for the threatened gopher tortoise. ALDOT's mission is to provide a safe, efficient, environmentally sound transportation network across Alabama. www.dot.state.al.us

Dallas-Fort Worth Herpetological Society is a 501c3 organization with a strong conservation ethic and focus on natural history and science. We were at the forefront of a move to protect box turtles in Texas from commercial exploitation (through the Box Turtle Partnership of Texas) and have been involved in herpetological surveys at two nearby nature centers. We partner with the Fort Worth Nature Center annually for an educational event that teaches hundreds of citizens about snakes and other herps of our area, and are involved in a variety of other educational events throughout the year. www.dfwherp.org



The Sandalwood Herpetology Club is actively engaged in raising Brown Mountain Tortoises, *Manouria emys*, Chinese Pond Turtles, *Mauremys reevesii*, and Florida Box Turtles, *Terrapene carolina bauri*, at school. We have an almost 1000-square-foot enclosure that is partitioned off for each species. Our students are learning about the plight of each species specifically and the entire turtle crisis worldwide in general. www.duvalschools.org/sandalwood/herpetology

Our full list of partners can be found at <http://parcplace.org/news-a-events/year-of-the-turtle/237.html>. 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.

An Interview with James Gibbs

By Al Breisch, PARC Joint National Steering Committee Co-Chair



James Gibbs and a tortoise in Santiago, 1999.

James P. Gibbs is a professor at the State University of New York College of Environmental Science and Forestry in Syracuse. He is co-author of several books on conservation biology and “The Amphibians and Reptiles of New York State: Identification, Life History and Conservation.”

1. How did you become interested in studying turtles and at what age did your interest in turtles start?

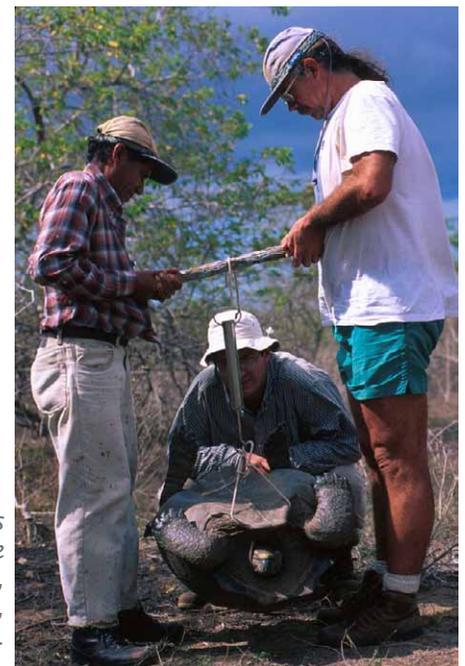
I grew up in a house on the shore of the Ottawa River north of Montreal and as a child poking around the river margins those mossy leviathans of the deep – Snapping Turtles - that emerged from the river on occasion to nest or on the ends of fishing lines made a big impression on me. I really got hooked on turtles as objects of study as a post-doc participating in the first comprehensive survey of giant Galapagos Tortoises. It took 15 years to move through the archipelago and visit all the tortoise country therein. I’ve measured some 6000 tortoises yet every new tortoise remains a delight to encounter. I am happiest looking for tortoises somewhere out in the great tangle of lava and vegetation that comprises the Galapagos.

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

Wetland loss and conversion of upland habitat remain the biggest threats. We can’t lose the focus on that. There is no doubt that over-collection is the main issue in many parts of the world, both for food and the pet trade, but without habitat nothing is possible for turtle conservation. Our landscapes have been transformed by agriculture much to the detriment of all turtles, aquatic and terrestrial, and agriculture will continue be a driving force degrading turtle habitats as the human population grows around the world.

3. What guidance on turtle conservation do you have for policy and decision makers?

I don’t think decision makers really understand both the liabilities and opportunities that turtles present as a focus of conservation. Turtles are not typical “wildlife” with demographics like the game animals we all learn about in college biology courses. In terms of liabilities, populations are very sensitive to any form of adult mortality, yet in terms of opportunities, turtle longevity can permit us some leeway and time “to get it right.” I’m reminded of a population of tortoises that failed to breed for 80 years due to rat predation but eventually received some attention and now is doing well. That’s an example of the opportunities turtles provide us. On the other hand poachers remain active but are not paid much attention to... with every adult goes some 5-6 decades of offspring or say 500-600 hatchlings. That’s an example of the extreme liability of turtle populations—it’s hard to get folks excited about doing something about 2-3 tortoises poached every year but it is a “big deal.” I do think few of us understand the long-term dynamics of turtle populations...for example, what will be the consequences of the extremely high nest predation rates Snapping Turtles are experiencing now in 50 years? Are we currently enjoying the consequences of a large standing stock of Snapping Turtles delivered to us by conditions 50 years ago when nest predator numbers were much lower? Last, I really don’t think folks understand the global nature of turtle trade and how the



James Gibbs weighing a tortoise at San Cristobal, Galapagos Islands, Ecuador.

great vacuum effect of the Asian markets is now reaching everywhere and is not about to relent anytime soon. It is absurd that we still commercialize wild populations of some species of turtles in some parts of the US despite it being contrary to the public trust doctrine that has served all other vertebrate wildlife in North America so well. Why are turtles exempt?

4. *What is your favorite turtle or group of turtles?*

I do like Snapping Turtles... every time I see one I marvel at their pugnacious nature, their incredible vulnerability associated with that puny plastron, the lovely odor they generate, their penetrating hazel-colored eyes, and the general ancientness they emanate that make me suddenly feel like the mere, recently evolved ape that I am.

5. *Do you have a favorite field story or defining moment as a turtle biologist?*

For me I most enjoy sitting around the fire with guardaparques of the Galapagos National Park who will talk for hours deep into the night about their adventures,

accidents, and logistics associated with their work saving giant tortoises over the last few decades...it's a manifestation of their true dedication to these creatures. Some will tell stories of living under starvation conditions and under severe water limitation for weeks to reach suspected tortoise hide-outs on the far sides of volcanoes, just to know whether tortoises were there or not and how they were doing. Why do people take such risks and endure such hardships? It can only be a love of turtles.

6. *What advice would you give young people (or adults) who love turtles and want to work with them?*

Embrace and kindle your love of turtles but combine it with understanding of turtle biology and turtle conservation politics...the synergy of the three together will make you an effective advocate for turtles. Most important, go out into the field every chance you get so you don't lose touch with the animals themselves. You will advocate most strongly for that with which you have a personal bond and much direct experience.

Turtles in the News

Is there a turtle crisis looming for sea turtles along the Great Barrier Reef off the coast of Australia? The World Wildlife Fund has received numerous reports of large numbers of sick, starving, and dead turtles washing up on beaches in April. The increase in turtle deaths may be more than five times higher this year compared to the same time last year. The full story can be accessed from the WWF at

wwf.panda.org/?201274/Turtle-crisis-looms-for-Great-Barrier-Reef.

The Western Pond Turtle Recovery Project of Seattle's Woodland Park Zoo, now in its 20th year, has helped to increase the population of this Washington state-endangered species from 150 to 1,500 turtles. Read more from the *Seattle Times* at

seattletimes.nwsourc.com/html/localnews/2015760462_turtles29m.html.

A recently discovered Western Pond Turtle in Edmonds, Washington was given to the Woodland Park Zoo as part of these efforts, according to *Edmonds Patch* at <http://edmonds.patch.com/articles/angered-western-pond-turtle-found-in-edmonds-could-bring-new-genes-to-the-breeding-pool>.

For more information on Western Pond Turtles conservation efforts, be sure to check out this month's "Turtle Spotlight" on Western Pond Turtle recovery efforts in Washington and California as well as an article on "Mapping US Turtles" in this issue of the *Year of the Turtle News*.

The *Myanmar Times* reports that 50% of Myanmar's illegal wildlife trade is in turtles and tortoises. From January 2010 to April 2011 alone, 22 individuals were convicted of attempting to smuggle 3,725 turtles or tortoises out of the country.

Read more on these alarming statistics at www.mmtimes.com/2011/news/589/news58917.html.

And finally, be sure to catch up on some of the turtle happenings in Connecticut from *TheDay.com* at

www.theday.com/article/20110807/NWS01/308079942/1018 and

www.theday.com/article/20110807/NWS01/308079936/1018,

as well as in Massachusetts from the *State Wildlife Research News Blog* at

wildliferesearchnews.blogspot.com/2011/08/state-of-turtle.html.

If you have items you would like to contribute to Turtles in the News, please send them for consideration to yearoftheturtle2011@gmail.com.

The Turtle Foundation – Working to Protect and Conserve Endangered Sea Turtles



Turtle eggs collected on Sangalaki Island, Indonesia, when The Turtle Foundation project began.

The Turtle Foundation was founded in 2000, when some divers and a filmmaker from Europe visited Sangalaki Island in Indonesia and were shocked to discover that nearly every nest laid by the Green Sea Turtles (*Chelonia mydas*) on that island and four others nearby was dug up and the eggs sold as a delicacy – this despite the fact that the sea turtles are threatened with extinction and officially protected under national and international law. They decided to act on behalf of these magnificent endangered creatures. As a result of our efforts, an agreement was eventually reached with the local government to stop the egg collecting in 2002. Turtle Foundation currently protects three of the islands, employing 15 local rangers year-round, and is working to protect the last two islands. On Sangalaki alone, more than 1.5 million hatchlings have been allowed to reach the ocean as a result of our project. Turtle Foundation is also working to increase protection for the spectacular marine reefs in this area, threatened by reef bombing, cyanide fishing, shark fishing, and illegal driftnetting.

Our second major project, in Cape Verde, West Africa, began in 2007 when we learned that in one

year over 1100 female loggerhead turtles (*Caretta caretta*) had been slaughtered for their meat when they came ashore to nest. This represents about 15% of the nesting population, the third largest in the world. In 2008 we began protecting one beach, and each year we've expanded the project.



A Loggerhead Sea Turtle tries to nest near a hotel construction zone on Boavista Island.

This year, with participation of international volunteers and support from the Cape Verde military, six beaches are being patrolled. In 2010, only 10 turtles were killed on our protected beaches. We collect data on the turtles, organize community education programs and beach cleanups, hold beach camps for school children, and help train local tour guides. We are a founding member of the Cape Verde Sea Turtle Network, bringing together stakeholders



An old loggerhead turtle carcass sits near one of Turtle Foundation's beach camps on Boavista Island, Cape Verde.

involved in turtle conservation on Boavista, and we work with hotels and other beach construction projects to make their buildings as turtle-friendly as possible, particularly with regard to habitat destruction and lighting. Boavista is a growing tourist destination, and we strive to make turtle conservation benefit both turtles and the community.

We are a small, primarily volunteer organization, dedicated to protecting and conserving endangered sea turtles. For more information, check out our website www.turtle-foundation.org, our Facebook pages, and our blog www.turtlefoundationcv.blogspot.com.



Turtle Foundation's 'School in Nature' participants pose with trash collected from the beach.

A Brief History of Marine Turtles and the US Fish and Wildlife Service's International Marine Turtle Conservation Program

By Earl Possardt, USFWS International Marine Turtle Program Officer

For over 120 million years, marine turtles roamed the seas fulfilling their ecological roles and evolutionary destinies unimpeded by any serious threats to their existence. They survived and flourished even when the great dinosaurs were vanishing from the earth about 65 million years ago. As recently as 3 million years ago, marine turtles were still diverging into the seven species we now recognize during our relatively short human history. Archaeological evidence demonstrates our earliest interactions with and exploitation of these marine species for food were in Kwazulu, South Africa in the Middle Stone Age, 49,000 and 50,000 BP. With low human populations and limited hunting and fishing technology, exploitation was sustainable and sea turtles and humans coexisted. This began to change in the 1400s, when European exploration brought large fleets of ships and their crews to the Western Hemisphere. Nesting turtles in the Caribbean were easy sources of fresh meat and, even better, the turtles could be kept alive on deck for months to ensure the availability of fresh meat for the fleets while they traveled the seas in search of new lands and treasures. The first evidence of overexploitation was the extirpation of the Green Sea Turtle (*Chelonia mydas*) nesting population in the Cayman Islands, the largest known in the Caribbean.

Fast-forward to the 20th century, and there were vast numbers of coastal inhabitants exploiting nesting populations for eggs and meat, directed fisheries for sea

turtles, global demand for exquisite jewelry made from the scutes of the Hawksbill (*Eretmochelys imbricata*), and an ever-increasing trawl, longline line hook, and gill net fisheries accidentally capturing and killing tens of thousands of sea turtles. We came very close to driving the Kemp's Ridley (*Lepidochelys kempii*) to extinction in the last century, the Leatherback (*Dermochelys coriacea*) is in imminent danger of extirpation from the Pacific, and Loggerheads (*Caretta caretta*) face increasing threats from fisheries bycatch throughout every stage of their marine life cycle in every ocean basin. Recognizing the severe threats to sea turtle species, six of the seven species were listed as either Endangered or Threatened in 1978 under the authority of the U.S. Endangered Species Act by the U.S. Fish & Wildlife Service and the National Marine Fisheries Service, who share responsibility for the conservation of marine turtles.

For more information, visit www.fws.gov/northflorida/SeaTurtles/seaturtle-info.htm and www.fws.gov/international/DIC/species/marine_turtles/marine_turtle.html. Further information on the USFWS International Marine Turtle Conservation Program can also be found in the March issue of the Year of the Turtle News, available at www.yearoftheturtle.org.



Plastic Pollution: Our Plastic Trail and Its Effects on Sea Turtles

In an editorial published in the Marine Turtle Newsletter earlier this year, marine biologists Dr. Colette Wabnitz of the University of British Columbia and Dr. Wallace Nichols of the California Academy of Sciences shed light on the dangerous impact of plastic bottles, bags, and other products on sea turtles. The facts highlighted by Wabnitz and Nichols included:

- Worldwide, plastic pollution is adding to the stress on endangered ocean wildlife, like sea turtles
- Plastic can be ingested by or entangle sea turtles and can physically interfere with their nesting activity on beaches when it accumulates in large amounts
- Approximately half of all sea turtles surveyed had ingested plastic items
- Micro-plastics are accumulating in the molluscs and crustaceans that sea turtles eat

The good news? We can do something to reverse these impacts. Wabnitz and Nichols provide a variety of measures that can be done by everyday people to assist in bringing about an end to this "sea" of plastics in the ocean. Actions that you can take include:

- Avoid buying plastic-bottled beverages
- Buying products with minimal or reusable packaging
- Buying in bulk whenever possible to reduce packaging
- Buying used items
- Seeking out reusable shopping and produce bags and always taking them along when you shop
- For coffee and or tea: bring your own mug
- For food: bring your own container

The entire March 2011 press release as well as the official editorial from Drs. Wabnitz and Nichols can be accessed from seaturtle.org at www.seaturtle.org/plasticpollution/.

September's Featured Citizen Science Programs

Get involved in a citizen science (volunteer) program in your neighborhood, community, or elsewhere!

Citizen science places volunteers of all backgrounds and ages in partnerships with organizations and scientists to collect important biological data. This month we continue to highlight sea turtle citizen science programs, including ways you can become involved in North Carolina, Thailand, and in fact anywhere around the world you may observe a sea turtle! A full list of all our US and international turtle citizen science programs can be found at www.yearoftheturtle.org. We thank everyone who has contributed information on their citizen science programs to the Year of the Turtle thus far. Are you involved with a turtle citizen program or have information on a specific project that you would like to share? Please send information on your citizen science programs to yearoftheturtle2011@gmail.com and make sure your project helps us get more citizens involved in turtle science!

North Carolina Sea Turtle Project

This project is facilitated by the North Carolina Wildlife Resources Commission's Division of Wildlife Management. The goal of the initiative is to monitor North Carolina's sea turtle population using volunteers, organizations, and



agencies. Volunteers have many ways they can help, including walking a beach in search of turtle tracks and nests, guarding nests, especially near hatching time, responding to turtle strandings, and transporting injured turtles to rehabilitation centers. Data gathered by participants is made available to biologists for study. Turtle conservation is facilitated directly by interactions between participants and by biologists.

Contact Information

Matthew Godfrey
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<http://www.seaturtle.org/groups/ncwrc/index.html>

Ecovolunteer



This program is located on the Phra Thong Island, Thailand. The objective for the program is to aid Leatherback, Olive Ridley and Green sea turtles. This is done through monitoring and protection of turtle nesting sites. Behavioral habits such as foraging of juveniles on and near the island are also monitored to increase the knowledge of sea turtles. Along with working with sea turtle research, volunteers have the chance to learn about Thai wildlife, help with rehabilitation of the Mangrove Forest and restoration projects of the coral reef, teach children in a local school English and about the environment, and aid tourist awareness about the conservation efforts taking place on the island.

Contact Information

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<http://www.ecovolunteer.org/>
(Click on "Reptiles: Sea Turtles")

International Sea Turtle Observation Registry

In an effort to aid sea turtle biologists and conservationists, iSTOR and seaturtle.org collect information on turtle sightings. Anyone can report a sighting online, and live turtle sightings are used by biologists and conservationists to understand the distributions of sea turtles around the world. Dead turtles can also be reported so that cause-of-death can be determined and authorities can be notified (if needed). The organization keeps an online map of recent turtle observations for the public.

<http://www.seaturtle.org/istor/>



Sea Turtle Educational Materials Now Available!

A variety of teacher resources – including lessons and games on sea turtle conservation – are available from the Dauphin Island Sea Lab. Visit dhp.disl.org/resources.html, where you can access these lessons and others resources for teachers. This wonderful curriculum was designed by Stephanie Wright Serra and Joan Turner, Marine Educators at the Dauphin Island Sea Lab. Dauphin Island Sea Lab is located on Dauphin Island on the coast of Alabama. This curriculum has been presented at the National Science Teachers Association conference in San Francisco and at a local workshop funded by NOAA Oil Spills Education.

Are You an Educator or Interpretive Naturalist?

We continue to work to develop a collection of Year of the Turtle resources for teachers and naturalists to use for turtle education. If you are willing to share, please send your unit materials, educational program information, websites, 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 the materials.

Federal Turtle Conservation Efforts, continued from p. 1

State University, and Lincoln University. Their research will fill critical knowledge gaps, such as the community structure of turtles in wild populations versus introduced sites, diet overlap with other species, the effects of a 3-year moratorium on turtle harvest, and long-term local and regional changes in population structure. – *Dustin Taylor*

The Center for Wetlands and Stream Restoration Partners with PARC in Restoring Wetlands and Streams for Turtles

PARC is working with the Center for Wetlands and Stream Restoration (CWSR) to restore wetlands and streams for turtles across North America. Large numbers of wetlands of different shapes, sizes, and depths are being built to benefit turtles in fields, forests, and rangeland. Streams that were historically moved and straightened provide poor habitat for turtles. Creeks that were converted to ditches are now being restored with sinuous floodplains and channels containing numerous pools and wetlands for turtles on the Daniel Boone National Forest in Kentucky.



Blanding's Turtle (Emydoidea blandingii), by Melanie Foose.

Wetlands and streams are being constructed with features that turtles can use for feeding, nesting, and hibernating. Large logs and loose mounds of soil are being placed in wetlands and streams that turtles can use for sunning. These restored habitats are being used by the Blanding's, Eastern Painted, Eastern Box, Common Snapping, Softshell, Spotted, and Western Painted Turtles.

Complex habitat features are being added to wetlands and streams



Eastern Painted Turtle, Chrysemys picta picta, by Tom Diez.

during construction to help turtles hide from predators. Root masses, piles of branches, large clumps of sod, and leaves were placed in the waters of newly restored wetlands near the Trinity River in California to help the rare Western Painted Turtle. A wetland built last year with these features near Kamloops, British Columbia has been colonized by Western Painted Turtles.

Turtle hibernation sites are being created during wetland and stream restoration projects, including sites created from springs that had been historically drained on the Monongahela National Forest in West Virginia. The restoration involved disabling buried log drains, reshaping basins, loosening soils that had been compacted by livestock, and then placing the logs back into the completed wetlands.

The CWSR is creating nesting habitat for turtles near wetlands and streams by loosening compacted soils surrounding these habitats. Patches of sandy loam found during construction are shaped to create islands and moved to sunny places above the water level near the restored areas.

You can learn how to restore wetlands for turtles and other species

by reading *Wetland Restoration and Construction—A Technical Guide*, by Thomas R. Biebighauser. Published in partnership with PARC, the new book contains detailed instructions for restoring wetlands at a low cost. You are also encouraged to attend one of the hands-on wetland restoration workshops offered by the CWSR and PARC. A schedule for wetland training can be found by visiting www.wetlandsandstreamrestoration.org.

-Thomas R. Biebighauser, U.S.D.A. Forest Service, Daniel Boone National Forest, Kentucky

Kemp's Ridley Sea Turtles at Laguna Atascosa National Wildlife Refuge*, Texas

Where the Rio Grande empties into the Gulf of Mexico is where Kemp's Ridley Sea Turtles (*Lepidochelys kempii*) return every summer to nest in the warm tropical sands of Texas beaches. To ensure the continued progress of this highly endangered sea turtle, the staff and volunteers of the Laguna Atascosa National Wildlife Refuge (LANWR) make their own annual return.

Since 1999, the refuge has been working to restore the Kemp's Ridley population on the beaches of South Padre Island. Working with the Gladys Porter Zoo and Sea Turtle, Inc. (STI), a non-profit organization committed to the restoration of all sea turtles, the refuge supports at least one intern every year to assist



Volunteers line up the Kemp's Ridley hatchlings on South Padre Island at a public release, 2011. Photo by Rachel Arney.

with nest monitoring, and provides technical assistance and equipment. Interns and volunteers through LANWR and STI patrol 64 miles of beach on the island seven days a week from mid April to mid July. On any given day there are three to four individuals driving the length of the beach on ATVs scanning the sand for signs of a nesting female.

Indications of a female coming ashore include alternating flipper tracks in the sand. Occasionally a lucky few will spot a female in the process of digging her nest cavity and laying her eggs. This is the time when the female gets tagged with a unique six-digit metal tag on her front left flipper, and a Passive Integrated Transponder (PIT) tag for future identification. The eggs from each nest are excavated and placed in a corral and monitored for 45-55 days. The hatchlings are then released from a safe location on the beach. The public is often invited to watch a release.

The Kemp's Ridley most commonly nests along the shores of Rancho Nuevo, Mexico, but its range extends well into the Padre Island National Seashore near Corpus Christi, TX. This year has been a successful year for all beaches in Texas, with the most female Kemp's Ridley nests since the project's inception in Texas in 1980. Donna J. Shaver, Ph.D., Chief of the Division of Sea Turtle Science and Recovery, National Park Service, at Padre Island National Seashore has recorded a total of 199 Kemp's Ridley nests this season and an additional 5 Green Sea Turtle nests for the Texas coast.

Although the Kemp's Ridley nesting season is coming to a close, other species of sea turtles have been known to nest along the South Texas beaches including Greens, Loggerheads, Hawksbills, and Leatherbacks. Due to the tireless dedication of many, the Kemp's Ridley species is one step further from extinction.

- Rachel Arney



Onlookers watch as Kemp's Ridley hatchlings make their way to the water on South Padre Island. Photo by Rachel Arney.

Laguna Atascosa National Wildlife Refuge Specialist Stacy Sanchez with a Kemp's Ridley hatchling. Photo by Rachel Arney.





Common Musk Turtle, *Sternotherus odoratus*, by Tom Diez.

Common Musk Turtles at the Upper Mississippi River National Wildlife and Fish Refuge*

The Upper Mississippi River National Wildlife and Fish Refuge in cooperation with the Iowa DNR Guttenberg Fisheries Management Office is conducting a study about the Common Musk Turtle (Stinkpot, *Sternotherus odoratus*). Data will be collected on population numbers and composition, habitat preferences, and movement.

Very little is known about this secretive creature, even though it is a listed threatened species in Iowa. This Stinkpot population is on the northern edge of its range. Unlike most turtles that like to bask in the sun, this turtle spends most of its life underwater in backwaters, marshes, and ponds. They are nocturnal, resting during the day buried underneath the mud or in thick aquatic vegetation. At night they walk along the bottom probing the mud with their head to search for crayfish, mussels, tadpoles, snails, and insects. They are rarely seen on land except when the female is laying her eggs.

Baited nets are being set in a variety of locations to try and capture musk turtles. The nets are checked within twenty-four hours after they are set. Refuge staff Neil Henkenius said, "This study would be difficult to do without the dedication of Kevin

Hanson and Aaron Schwartzhoff, Department of Natural Resources (DNR) fisheries staff. They have also loaned us the nets we are using to capture turtles. We've trapped over one hundred turtles so far, including 2 male and 2 female musk turtles. They have been fitted with small radio transmitters, their shells uniquely notched to identify them, and now we are tracking their movements weekly. One male turtle has stayed in the same area so far, the other one, nicknamed Stinky, has crossed the open channel and moved about one mile away. We've also seen a significant amount of nest predation, probably by Raccoon" [*Procyon lotor*].

Even though they are one of the world's smallest turtles at 6 inches, they put up a fierce fight when disturbed, clawing and biting aggressively. If this does not work, they spray a foul, musky odor, earning them the nickname "stinkpot". Henkenius confirmed, "They're not shy. They stretch their long neck around and try to bite you. At least I haven't been sprayed yet."

Refuge and Iowa DNR staff will continue trapping, marking, tracking, and recording data until the turtles go into hibernation this winter. The information learned about these turtles will be used to help guide future management of musk turtles and their habitat.

Ecology and Conservation of Turtles in Western North America: Long-term Monitoring by the USGS and Partners

The Western Pond Turtle occurs in western North America from Washington to northern Baja California. Earlier, it was proposed for Federal threatened status but was not found warranted for listing. It remains a species of concern to the public and many agencies.

To improve our understanding of this turtle, I continue specific studies and have produced several co-authored publications on the ecology of the species. In graduate school I started a long-term monitoring of one population in 1968-1971. Recent revisits revealed that a few of those marked turtles (ca. 5%) are still alive today. These records show the remarkable longevity of some adults and a few are estimated >55 yrs old.



Western Pond Turtle, *Actinemys marmorata*, by Susan Thomas.

Recently, a team of us submitted a "handbook" that covers its biology, sampling techniques and conservation (see Year of Turtle News, June 2011). This effort is a consortium of many private, state, and federal agencies, including the California Dept. Fish and Game, Oregon Dept. of Fish and Wildlife, U.S. Forest Service, and Bureau of Land Management. Once released, it and other recent

advances will be highlighted in a regional workshop to be hosted by the Western Section of The Wildlife Society in spring 2012. All these efforts represent dedicated work by a broad spectrum of interested people, organizations, and agencies.

Providing information to the public and agencies is a priority. In the last two years alone, I delivered 8 outreach efforts on turtles including presentations on field data at 3 scientific meetings, organizing sessions on freshwater turtles (two conferences) and providing workshops (twice).

Lastly, a few turtle experts in USGS started preliminary discussions to develop a federal effort on turtle research and monitoring, not unlike the existing program of ARMI (Amphibian Research Monitoring Initiative) in the Department of the Interior. Although entirely informal, this is meant to better coordinate the research and management work of government scientists with interest in turtles of North America. It is meant to complement other groups such as PARC that is already dedicated to the cause for turtles. These efforts all contribute to spreading the word about turtle conservation under the broader theme of the Year of the Turtle. – *R. Bruce Bury, U.S. Geological Survey (Dept. of the Interior), Forest and Range Ecosystem Science Center*

U.S. Fish and Wildlife Service Northeast Region launches a Year of the Turtle Website

The USFWS Northeast Region has launched a Year of the Turtle website as a channel for engaging partners and the public in the challenges facing turtles and the conservation work across the Northeast U.S. The website (www.fws.gov/northeast/ecologicalservices/turtle) is being

implemented as a place to share information and tools for a variety of audiences. The site offers:

- Three pages highlighting Northeast Region work on turtles of concerns – Blanding's, Bog, and Cooters
- Photos of turtles species found in the Northeast
- Turtle videos
- Fliers
- Lists of events, volunteer opportunities, and citizen science programs

In addition, we encourage our readers to watch two videos from the USFWS – one from the Partners for Fish and Wildlife on restoring important bog turtle habitat, available on their home page at www.fws.gov/partners (scroll down to the video), and the second on the release of headstarted Blanding's Turtles in Massachusetts, available currently on YouTube.com at www.youtube.com/watch?v=hqbs4TuJMsM.



Bog Turtle, Clemmys muhlenbergii, by John Vanek.

Turtles in CITES: U.S. Involvement in Regulating the International Trade of Wildlife

The US Fish and Wildlife Service is responsible for implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for the United States. CITES parties meet every two to three years at their Convention of Parties (COP) to discuss changes in trade

regulations and the administration of the convention. Between these major COPs (the last was COP 15 in 2010), parties carry out the work and decisions of the COP through three sets of annual committee meetings – the Animals Committee (AC), the Plants Committee, and the Standing Committee.

The 25th meeting of the Animals Committee was held in Geneva Switzerland July 18-22, 2011. Trade pressure on reptiles continues to be an issue that the Animals Committee addresses. At this year's meeting both Asian snakes and turtles were on the agenda. Issues are discussed by the larger plenary group but recommendations to that group are made by a smaller working group. Working groups were formed for both snakes and turtles. As far as turtle agenda items went, the IUCN Tortoise and Freshwater Turtle Specialist Group was previously commissioned to prepare a report on "a study of progress on conservation of and trade in CITES-listed tortoises and freshwater turtles in Asia", upon which the working group based their recommendations.

In its final recommendations (AC25 WG7 Doc. 1) the Animals Committee agreed to:

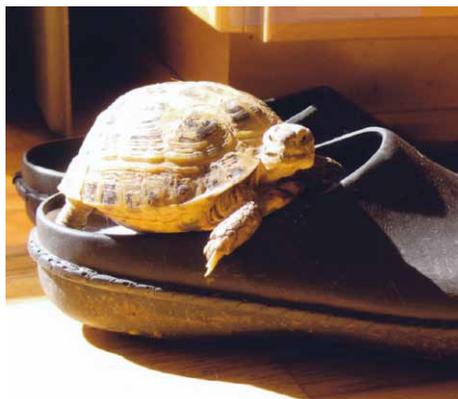
- undertake a study to identify and discuss factors of relevance to making Non Detriment Findings (NDFs) for tortoises and freshwater turtles and report progress to AC26 and CoP16;
- make recommendations to amend the Appendices for turtle species based on a review of the results of 2010 North American Turtle Trade Workshop, St. Louis and the 2011 Asian Turtle Conservation Workshop, Singapore by AC26;
- encourage Parties to engage partners with expertise and

Attendees participate in the 25th meeting of the CITES Animals Committee in Geneva, Switzerland. The USFWS participates in these meetings on behalf of the United States. CITES regulates the international trade in wild animals and plants.



- resources when evaluating disposal options for confiscated live turtles, such as repatriation or addition to conservation breeding programs;
- note that accurate NDFs are undermined by the undocumented trade in parts and derivatives and by the questionable use of source codes, requesting that the Standing Committee emphasize these topics in its recommendations and expressing concern about trade management challenges; and
 - requested that the Standing Committee consider proposing a decision at CoP16 directing Parties to report on their implementation of enforcement and compliance recommendations.

In addition to the working group, turtle species were discussed in Review of Significant Trade. The Review of Significant Trade (Resolution Conf. 12.8 [Rev COP13]) is a review of the biological, trade, and other



Pet Russian Tortoise (*Testudo horsfieldii*) repose on a garden clog. Photo from Dede Olson.

relevant information on Appendix-II species subject to levels of trade that are significant in relation to the population of the species, in order to identify problems concerning the implementation of the Convention, and possible solutions. Species subject to the Review of Significant Trade are selected by the Animals or Plants Committees. Non-compliance by any State with the solutions recommended by these Committees may ultimately lead to a recommendation by the Standing Committee to suspend trade with that State in specimens of the species concerned. Two new range-wide species reviews—*Podocnemis unifilis* and *Kinixys homeana*—were added to this process and join the other turtles (at various stages of range reviews): *Heosemys annandalii*, *Heosemys grandis*, *Heosemys spinosa*, *Testudo horsfieldii* (Russian Tortoise, common in the pet trade), and *Amyda cartilaginea* (Asian Softshelled Turtle), currently in significant trade.

The Asian turtle trade will be further discussed at the Standing Committee in Geneva August 15-19, 2011. While the Animals Committee discusses recommendations pertaining to science of the trade for the convention, the Standing Committee will discuss management and implementation of the convention. —*Thomas Leuteritz, U.S. Fish and Wildlife Service (U.S. Department of the Interior)*

USDA Forest Service Region 5 (California) National Forests' Year of the Turtle Projects

Angeles National Forest:

Los Angeles River, San Gabriel River and Santa Clara/Mojave Rivers Ranger District - Leslie Welch (Wildlife Biologist) monitors the recovery of pond turtles and their habitat affected by the 2009 Station Wildfire, with projects that limit access with closures, and removal of non-native fauna and flora.

Eldorado National Forest:

Georgetown Ranger District: Jann Williams (Fisheries Biologist) continues to monitor a pond affected by the 2006 Ralston Wildfire. Collaboration with Matt Triggs (American River RD), the Horseshoe Bar Fish and Game Preserve and Trout Unlimited transplanted willow starts and created basking structures in 2010.



Above: Ralston Pond, Eldorado National Forest, California.

Below: Willows planted as part of restoration sprout on the banks.



Lassen National Forest:

Hat Creek Ranger District: Karen Harville (Wildlife Biologist) and Danny Burton (Fisheries Biologist) provide oversight of studies and future monitoring of pond turtles on hydroelectric projects along the Pit River.

Sequoia National Forest:

Kern River Ranger District: Steve Anderson (Wildlife Biologist) is the local Forest Service contact for efforts by the Kern River Preserve (Audubon California) and the Southern Sierra Research Center whose ongoing head start projects for pond turtles benefit the District through previous cost share agreements

Western Divide Ranger District: Robin Galloway (Wildlife Biologist) experiments with creating floating basking structures for pond turtles. Her efforts are used to monitor pond turtles as well as an educational opportunity with high school students at Field Science Camps.

Shasta-Trinity National Forest:

Shasta Lake Ranger District: Todd Johnson (Wildlife Biologist) provides oversight of studies and future monitoring of pond turtles on hydroelectric projects along the Pit River.

Big Bar Ranger District: Becky Rogers (Wildlife Biologist) is rehabilitating old mining claims where groundwater pools, by reconstructing them to serve as functioning ponds for pond turtles.

Sierra National Forest:

Bass Lake and High Sierra Ranger Districts: Phil Strand (Fisheries Biologist) provides oversight of studies and future monitoring and telemetry efforts for pond turtles on hydroelectric projects along parts of



Robin Galloway of the Sequoia National Forest and her crew build floating basking structures for Western Pond Turtles.

the San Joaquin River.

Placerville Ranger District: Susan Yasuda (Wildlife Biologist) designed an educational display showcasing the “Year of the Turtle” for the local library that illustrates the life history and ecology of turtles.

Six Rivers National Forest:

Lower Trinity Ranger District: Andrea Collins (Fisheries Biologist) is working with Herpetologist Jamie Bettaso to revisit research areas that have marked pond turtles with the intent of developing a monitoring plan.

Orleans Ranger District: Hope Woodward (Wildlife Biologist) monitors ponds and a known pond turtle nesting bench to determine the extent of predation.

Stanislaus National Forest:

Groveland Ranger District: Steve Holdeman (Aquatic Biologist) works to rehabilitate pond turtle habitat affected by the 1999 Pilot Wildfire. Locating occupied pools along the river is the first step to identifying management areas of upland vegetation in order to restore nesting

habitat.

Groveland Ranger District: Roy Bridgman (Wildlife Biologist) mitigated the collision and potential mortality with migrating pond turtles on a non-system road by closing it with strategically placed boulders. To better monitor the populations, Roy regularly visits occupied ponds, marked and recaptured adult turtles, removed non-native bullfrogs from ponds, and experimented with floating basking structures.

Tahoe National Forest:

American River Ranger District - Dan Teater (Fisheries Biologist) and Marilyn Tierney (Wildlife Biologist) are working with Amy Lind (USFS Herpetologist) monitoring pond turtles and developing a study plan for hydroelectric projects.

– *By Kary Schlick, U.S. Forest Service, Six Rivers National Forest*

Year of the Turtle Contributions by the US Forest Service, Pacific Northwest Research Station (PNW)

2011 State of the Turtle is a report by Dr. Deanna (Dede) Olson (PNW scientist) and Dr. Ross Kiester (retired PNW scientist, currently with the Turtle Conservancy) that highlights the current threats to turtles and tortoises, and the need for conservation, research and education (report available at www.usfs.gov).

FOCUS ON CONSERVATION

2011 Year of the Turtle

Turtles are disappearing from the planet faster than any other group of animals. Today, nearly 10% of turtle species are thought to be threatened with extinction. However, it's not just the turtles that are in trouble. The world's rivers and streams are also in trouble. The world's rivers and streams are being altered and degraded by human activities. This is a global crisis. The world's rivers and streams are being altered and degraded by human activities. This is a global crisis. The world's rivers and streams are being altered and degraded by human activities. This is a global crisis.



Photo by Steve Holdeman, U.S. Forest Service, Stanislaus National Forest. Photo by Steve Holdeman, U.S. Forest Service, Stanislaus National Forest.

yearoftheturtle.org). To aid outreach, this report has been translated into Spanish and French, and abstracted versions have appeared in the quarterly journal *Reptiles & Amphibians* of the International Reptile Conservation Foundation, and the Finnish journal *Herpetomania*. States and various Citizen Science groups have used text from this report to aid their turtle activities this year.

Prime Time for Turtles is a journal article by Ross Kiester and Dede Olson (*Herpetological Review* 42(2):198-204) and provides a more technical synopsis of the status of turtles, with a 'call to action' to work together to benefit turtles worldwide. Several conservation strategies are outlined.

The USA Turtle Mapping Project is a national project to compile new and existing locality data for US turtles and tortoises. Dede Olson is coordinating this effort with PNW student temporary employee Kimberly Barela of Oregon State University (see article this issue), among others. Data Forms are available at www.yearoftheturtle.org, and can be submitted to yearoftheturtle2011@gmail.com.

Year of the Turtle News articles go monthly to PNW's Kathryn Ronnenberg for final copy editing and newsletter layout, after Editor David Dimitrie has completed his work on the files. Kathryn and Dede Olson have written some articles. Kathryn has been reliably there at the 11th hour to get late-breaking news into the issue hours before web-posting on the first of the month!

The **Year of the Turtle Photo Contest Calendar** is also compiled by PNW's Kathryn Ronnenberg, when she receives the winning photographs from David Dimitrie, Ross Kiester, and Josh Ream (University of Alaska).



Winner: This young Leopard Tortoise (*Geochelone pardalis*) was photographed by Jaeger Herder on July 28, 2007 while searching for reptiles in Mhuzo, South Africa.



Year of the Turtle Logo contest winner Kelly Christiansen is a Data Services (GIS) Specialist at PNW.

Top 25 Endangered Turtles Flip Cards: much of the text for these cards was written by Amy Jo Lindsley, an Oregon State University research assistant hired with Recovery Act funds acquired by PNW. See flip cards at www.yearoftheturtle.org.

Twitter and Facebook contributions have been made by Yasmeen Sands, PNW Writer and Outreach Specialist, Olympia, WA.

Media Release has been coordinated by Sherri Richardson-Dodge, PNW Public Affairs Specialist, Portland, OR.

Subscribe Now!

Don't miss the upcoming editions of the Year of the Turtle News! If you have not already, subscribe to the monthly electronic newsletter by submitting an email with the subject "subscribe" to yearoftheturtle2011@gmail.com.

Upcoming Meetings and Events

Hatching Diamondback Terrapins Field School, Massachusetts
Division of Fisheries and Wildlife,
September 9-11, Wellfleet,
Massachusetts.

Wild About Turtles,
MassAudubon's Broadmoor Wildlife
Sanctuary, September 11, Natick,
Massachusetts.

Association of Fish and Wildlife Agencies 101st Annual Meeting,
September 11-14, Omaha,
Nebraska.

Association of Zoos and Aquariums Annual Conference,
September 12-17, Atlanta, Georgia.

Societas Europea Herpetologica (SHE; European Congress of Herpetology) and Deutsche Gesellschaft für Herpetologie und Terrarienkunde (DGHT; German Herpetological Society) Joint Conference, September 25-29,
Luxembourg and Trier.

Wetland Restoration Workshop,
September 25-30, Olympia,
Kentucky.

The Wildlife Society 18th Annual Meeting, November 11-13,
Waikoloa, Hawaii.

Sea Turtle and Marine Mammal Strandings Field School,
MassAudubon's Wellfleet Bay
Wildlife Sanctuary, November 11-
13, Wellfleet, Massachusetts.

International Congress for Conservation Biology, Society for
Conservation Biology, December
5-9, Auckland, New Zealand.

Turtle Spotlight: Western Pond Turtle Recovery Efforts in Full Stride in Washington and California



Western Pond Turtle, by Brian Hubbs.

Washington - The historic range of the Western Pond Turtle (*Actinemys marmorata*) spans the western edge of North America from the southern portion of Puget Sound to Baja Mexico. Their preferred habitats are ponds, lakes and wetlands as well as slow-moving rivers and streams. Ideal settings contain high-quality upland habitats, featuring sunny meadows for nesting and brushy forests for terrestrial overwintering.

Unfortunately these habitats are also very attractive and useful to people. A variety of impacts including wetland loss, road construction, non-native plant introductions, non-native American Bullfrog (*Lithobates catesbeianus*) invasion, fire suppression, dam construction, and over-hunting, led to severe declines. These detriments, combined with the species' late sexual maturity (≥ 10 years) and naturally low reproductive rate, left Washington's Western Pond Turtles in danger of extirpation from the state.

The situation became so severe that in 1991 there were only about 150 pond turtles alive in Washington and no young animals could be located. Subsequently, the species was listed as Endangered in the state of Washington and a cooperative recovery effort was initiated. Through the Washington State Department of Fish and Wildlife's Head-Start Program, wild turtle hatchlings and eggs are collected from their breeding areas and delivered to cooperating zoos. The Woodland Park Zoo in Seattle and the Oregon Zoo in Portland then raise the young turtles until they are about 10 months old. At this point the turtles are large enough to avoid predation by non-native

bullfrogs and they are released back into the wild.

The summer of 2011 marks the 21st year of the Head-Start Program. To date, more than 1500 turtles have been released into six sites that are held in public ownership and subject to habitat enhancement efforts. Reproduction has been documented at four of the six sites, and bullfrog control helps assure that some of these young reach maturity. Habitat shortages and predators are still concerns, but today's Western Pond Turtles have a strong foothold in Washington State. - *Eric Holman, Washington State Department of Fish and Wildlife*

Hatching Western Pond Turtle, OregonZoo.



California - In cooperation with government partners, the San Diego Zoo is raising Southwestern Pond Turtles (a subspecies of the Western or Pacific Pond Turtle) that will perhaps be the saviors of their species. The Southwestern Pond Turtle is San Diego's only native freshwater turtle and lives in pools within natural streams and sloughs which are becoming rare in coastal southern California.

The work began in 2003 when the U.S. Geological Survey (USGS) Western Ecological Research Center began monitoring the once-abundant populations within the Multiple Species Conservation Program (MSCP) region of San Diego. During these surveys, USGS detected just over 120 Southwestern Pond Turtles, including only 18 females in five locations. The population and genetics data suggested that without active management, the species could eventually be lost from the region, especially as two-thirds of the females were detected at only one location.

"Like many other native species in southern California, we needed to understand how pond turtles were coping with habitat loss and invasive species pressure," said USGS ecologist Robert Fisher of the San Diego field station.

Thomas Owens, a senior keeper in the Zoo's herpetology department, recently presented a paper to the international 9th Annual Symposium on the Conservation and Biology

Southwestern Pond Turtle at the San Diego Zoo. Photo by Ken Bohn, SDZ.



of Tortoises and Freshwater Turtles in Orlando, Florida. The paper outlined the strides made in saving the pond turtles, including the best timing for trapping females heavy with eggs, as well as the safest way to acquire the eggs and return the female turtles back to their environment. “We have learned that after two years of removing invasive species we see more pond turtle activity, and just last week researchers saw new young pond turtles at the study site!” Owens said.

San Diego Zoo Global, the USGS, the San Diego Association of Governments (SANDAG), and the California Department of Fish and Game kicked off the joint project in 2009. The primary goal of the partners was to retrieve eggs from the turtles that could be hatched at the Zoo and then raised safely to an age where they could better fend for themselves in the wild. Among the nonnative species that compete with pond turtles for food, or might eat them, are Green Sunfish (*Lepomis cyanellus*), American Bullfrogs, African Clawed Frogs (*Xenopus*

laevis), Red-eared Sliders (*Trachemys scripta*), and crayfish.

As a part of this study, researchers brought female turtles from the ecological reserve to the Zoo in 2009 and 2010. The females laid their eggs at the Zoo and then were returned to the reserve. Ten of the eggs hatched. Now those young turtles are living in the Reptile House. The Zoo also has 12 pond turtles on exhibit in its Elephant Odyssey habitat that are not part of this study but are serving as educational ambassadors for this project and the species. Owens said he hopes the turtles in Elephant Odyssey will inspire guests to see that they can help conserve species in their own backyards.

– San Diego Zoo Public Relations

The California Department of Fish and Game is editing the final version of a conservation plan for California’s only remaining native turtle, the Western Pond Turtle. The plan includes a wealth of information about general ecology, sampling methods, detailed descriptions of specific conservation issues in California’s diverse bioregions, recommendations for statewide standards and protocols, along with educational information and needs.

The plan’s intended audience is everyone – scientists, biological consultants, agency biologists, land managers, and the general public. The plan, expected to be finalized no later than October 2011, will be available on the Department’s website (www.dfg.ca.gov).

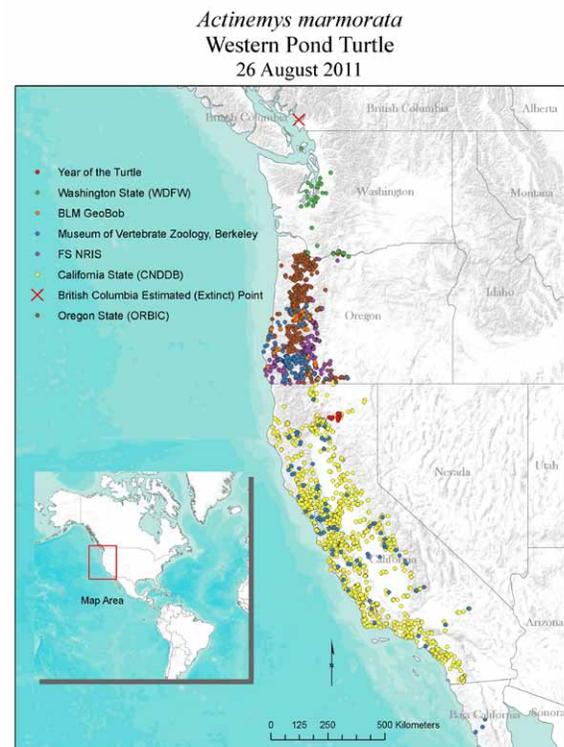
– Betsy Bolster, California Department of Fish and Game

Mapping US Turtles

By Kimberly Barela, US Forest Service, Pacific Northwest Research Station and BioResource Research Program, Oregon State University, Corvallis, OR

At a slow and steady pace, the US Turtle Mapping Project has spent the last eight months diligently mapping the distribution of selected species of freshwater and terrestrial turtles. Since January, I have dedicated my focus to the Western Pond Turtle and the Painted Turtle in the Pacific Northwest. For the Western Pond Turtle, mapping of all known sites is almost complete (see map, right). However, data collection is far from over, and any efforts to find and contribute to the Western Pond Turtle distribution map are still welcomed and highly appreciated. The Painted Turtle distribution map is still in progress. I am now compiling data from northwestern US states and Canadian provinces (see map below).

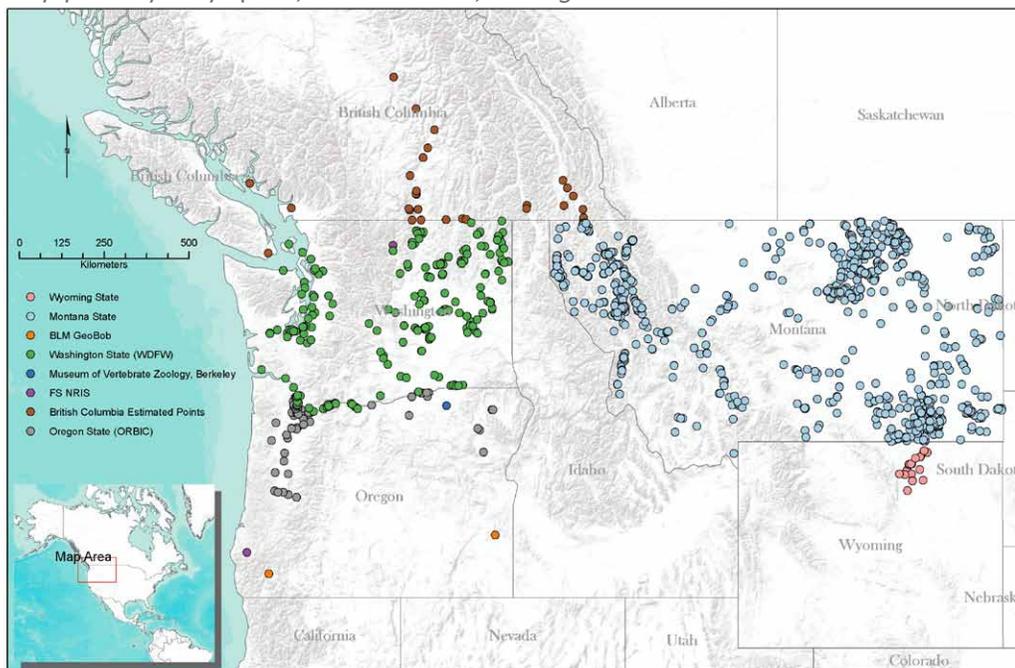
It has been my honor to work on this project, and it



is a thrill to see the progress of the US Turtle Mapping Project take form through these distribution maps. With two species of turtles progressing nicely and data being compiled by my collaborators and partners around the country, the US Turtle Mapping Project is making

progress in the Year of the Turtle. As always, if you are interested in working with us on this project or have new observations to share, please contact Dede Olson at dedeolson@fs.fed.gov.

Map for *Chrysemys picta*, Painted Turtle, 26 August 2011.



Meet the PARC Year of the Turtle Team: Terry Riley

Terry Riley joined the National Park Service in Fort Collins as PARC's Federal Agency National Coordinator in October 2010. Terry is a professional wildlife biologist, and his research has focused on techniques to maintain and enhance population viability in grassland, shrubland, and wetland ecosystems. Most recently Terry served as Vice President of Policy for the Theodore Roosevelt Conservation Partnership, where he coordinated policy development for 20 conservation organizations. Prior to that, he was Director of Conservation for the Wildlife Management Institute. He also helped develop a set of conservation strategies for the lesser prairie-chicken and dunes sagebrush lizard in New Mexico, both candidate



Terry Riley with young tortoise, by Brian Aucone, Denver Zoo.

species for ESA listing. His federal and state experience includes work on two national forests and as a research biologist with the Iowa DNR. Terry completed his undergraduate work at Kansas State University, holds MS degrees from New Mexico State University and Ohio State University, and a Ph.D. from Ohio State University.

Terry says: "My first encounter with a herp was when I was 8 years old and living in Faringdon, England. There was a pond near an athletic field where everyone else was playing soccer. I wasn't much interested in sports, so I explored the pond. I found a newt in that pond and thought it was one of the most exciting wildlife I had ever encountered. More recently, I was out exploring some new created wetlands on my property near the South Platte River here in Colorado and came across an Ornate Box Turtle (*Terrapene ornata*). I picked him up, but he was very feisty and tried to bite me. The last I saw that turtle, he was pacing off to a nearby prairie dog town."

Dr. R. Bruce Bury: Long-term Turtle Expert

By Gwen W. Bury, PhD student, Department of Zoology, Oregon State University



Bruce and Gwen measuring Western Pond Turtles by the side of a stream in northern California.

My dad, Dr. R. Bruce Bury, took me turtle trapping for the first time when I was in middle school in Colorado. My parents had organized a nature workshop for my class, and we spent hours learning about turtles of various kinds. Bruce showed me how to sneak up to the shore and spot turtles with binoculars, to bait traps, and measure carapace length. My friends were startled by Snapping Turtles (*Chelydra serpentina*) and scratched by Painted Turtles (*Chrysemys picta*). We all had a great time and learned many facets of turtle knowledge. On that day I caught a glimpse of my dad as Bruce Bury, turtle expert.

Bruce started catching turtles younger than I did, while growing up as an amateur herpetologist in northern California. In elementary school in the mid-1950s, Bruce caught a Western Pond Turtle (*Actinemys marmorata*) just outside Sequoia Park in Eureka, CA. His interest, like their population, has stood the test of time. Bruce's first news note, which concerned turtle capture methods, was published in 1962, and his most recent paper, published in 2011, was also about turtle capture.

After finishing his dissertation on Western Pond Turtles at Berkeley, Bruce moved on to study a variety of other wildlife, including chelonians. He was extensively involved in Desert Tortoise (*Gopherus agassizii*) surveys in California and Nevada, as well as Blanding's Turtles (*Emydoidea blandingii*) in Nebraska, and Painted Turtles in Eastern Washington. Bruce has also studied Berlander's Tortoises in south Texas, as well as a survey in the panhandle of Florida for Box Turtles (*Terrapene carolina*). During the Florida trip, Bruce was excited to be able to catch his first Alligator Snapping Turtle (*Macrochelys temminckii*), as well as to see two

species of Map Turtles.

Bruce worked in various studies not only in the United States, but also in Mexico. He participated in three expeditions to survey for Bolson Tortoises (*Gopherus flavomarginatus*) in Northern Mexico, which are now the most imperiled of the North American tortoises. While cooperating with Mexican biologists, he also took two trips to Isla Tiburón to survey Desert Tortoises. Turtle and tortoise work can be very exciting; on one trip, they put their heavily loaded pick-up truck on a barge to cross to the island. The boat began to take on water and almost capsized into shark-infested waters!



Bruce exhibits two Western Painted Turtles from Medical Lake, Washington State.



Sometimes turtle measuring takes a village. (Large crew measuring Western Pond Turtles in California).

Sharing his knowledge is important to Bruce: he has written many publications and books, and he has taught at workshops. He has helped to organize various turtle efforts, including the Powdermill Turtle Ecology Group and many symposia and sessions at scientific meetings. In addition, he has mentored many students and technicians through the years. A large group of them usually joins us for the annual revisit to the site of Bruce's dissertation research.

Because of the number of marked turtles in the population, this site has become a favorite for continuing Bruce's long-term studies of Western Pond Turtles.

Bruce Bury has worked on turtles for over 50 years and continues to be passionate about studying them. Though he has also worked on many other organisms, turtle studies are frequently a weekend field trip with the family or a day outing to show students how to trap turtles. I was lucky enough to be one of those students and am now looking forward to collaborating with Bruce on many future projects on chelonians.



Bruce counting a Western Pond Turtle age rings and reading the marked scutes (to right is James Bettaso, USFWS).

Ask the Experts!

Do you have questions about turtle biology or turtle conservation issues, but you can't quite seem to find the answers? Submit your turtle questions via email (yearoftheturtle2011@gmail.com) to our panel of experts, and we will select questions to answer in our upcoming newsletter editions. Please include your name and location in your email message.

PARC Regional Working Group Spotlight: Southwest PARC Hosts Annual Meeting in Tucson, Arizona

The 2011 SWPARC Annual Meeting was held August 10–13 at the University Park Marriot in Tucson, Arizona and featured—among other herpetofauna topics—a collection of turtle research and conservation related talks, poster presentations, and discussions. A highlight of the meeting was a special session dedicated to turtle conservation: “Year of the Turtle, Southwest Style.”

Talks throughout the meeting included a Year of the Turtle update from Brian Aucone, Priya Nanjappa, and Terry Riley, as well as a talk entitled “A quantitative analysis of the state of the knowledge of the turtles of the United States and Canada: how much do we really know” by Jeffrey Lovich and J.R. Ennen. This was followed by Roy Averill-Murray’s presentation on the “New directions in the recovery of the Mojave (Agassiz’s) Desert Tortoise;” “Species assemblage and community structuring among ectothermic aquatic vertebrates with an emphasis on turtles” from J. Daren Riedle, Richard T. Kazmaier, and Wes B. Littrell; “Ornate Box Turtle Watch: using citizen science to collect data and increase awareness of

a nongame program” by Audrey K. Owens and Cristina Jones; and “Mexican tortoise project: status of a neglected population” from Taylor Edwards, Mercy Vaughn, Philip R. Rosen, Alice E. Karl, Robert Murphy, Kristin H. Berry, Ma. Cristina Meléndez Torres, Martín Francisco Villa Andrade, and Fausto Méndez De la Cruz. Sea turtles were certainly not excluded in these efforts at the Annual Meeting, as Jeffrey Seminoff presented on the “Biology and conservation of sea turtles of the Gulf of California.”

Meanwhile, poster presentations included an examination by Jennifer Germano, Kimberly Field, Kelly Wallace, Lindsay Perry, Paula Kahn, and Ron Swaisgood of “Do differences in release area habitat features affect post-translocation movement? A case study on Desert Tortoises

(*Gopherus agassizii*).”

For more information on the 2011 Annual Meeting, including a full look at the abstracts of presented talks and posters, visit www.swparc.org/meetings.html, and be sure to visit www.swparc.org/index.html for all the news and events related to SWPARC efforts.



Turtle Talk!

On August 20, the Georgia Department of Natural Resources, Wildlife Resources Division (www.georgiawildlife.com) hosted “Turtle Talk,” a free public program to celebrate PARC’s Year of the Turtle. With two classrooms next to an eight-acre lake, the Discovery Area at DNR’s Charlie Elliott Wildlife Center in Mansfield, GA was the perfect setting for this event. State herpetologist John Jensen and environmental outreach coordinator Linda May taught 30 attendees all about Georgia’s 27 turtle species—the various habitats they live in, physical traits that help them survive, threats they face, and how the GA DNR is working hard to protect rare species and keep common species common.

Participants especially enjoyed seeing and touching live captive turtles in the classroom, including Mud and Musk Turtles, Gopher Tortoises, and an Alligator Snapping Turtle with its worm-like lingual



Herpetologist John Jensen sets a turtle trap in Clubhouse Lake at Charlie Elliott Wildlife Center. Photo by Linda May.

lure. Of course, human hands were kept away from turtle mouths! The group’s excitement escalated as we headed outside and discovered 20+ turtles in the live traps in Clubhouse Lake, traps that John Jensen set just the afternoon before. Although the plethora of Yellow-bellied Sliders, Mud Turtles and Musk Turtles was satisfying enough, a fun bonus capture was a Midland Watersnake (*Nerodia sipedon pleuralis*) that entertained the

group by vomiting a recently-eaten bullfrog. Although the bullfrog did not fare well, all other animals were returned safely to Clubhouse Lake.

If you have been involved with a “Turtle Talk” and would like to share information on it as part of the Year of the Turtle, we would like to highlight it in one of the remaining Year of the Turtle News issues! Please send a brief write-up and several photos (if available) to yearoftheturtle2011@gmail.com, and we will work to include your efforts in an upcoming issue.



*Jensen inspects a turtle trap full of Yellow-bellied Sliders (*Trachemys scripta scripta*) as Turtle Talk participants look on. Photo by Linda May.*

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