

www.YearoftheTurtle.org

Year of the Turtle News

No. 3

March 2011

Basking in the Wonder of Turtles



One of the last of its kind: a Yangtze giant softshell turtle (*Rafetus swinhoei*) surfaces in a lake in Vietnam. Only four individuals are known to exist. Photo by Brian D. Horne.

Turtles in Trouble

Turtles are in the midst of a survival crisis, and this crisis has never been greater. The world’s most endangered species have been named in a newly released report by the Turtle Conservation Coalition. The release of the “Turtles in Trouble: 25+ Endangered Tortoises and

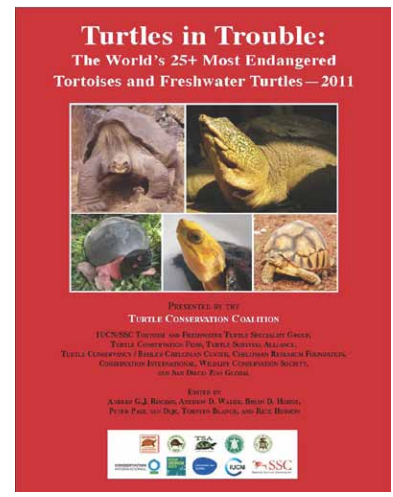
Freshwater Turtles” report paints a somber portrait for turtles of the world, and specifically for a list of the 25 most endangered tortoises and freshwater turtles. These 25 turtles, along with an additional 24 species highlighted in the report, are being decimated by illegal hunting for both food and the pet trade along with habitat destruction. Many of these turtles are threatened with extinction within the next several decades if strong conservation efforts are not taken.

“Turtles in Trouble” was released at a recent workshop hosted in Singapore by the Wildlife Conservation Society (WCS) and Wildlife Reserves Singapore. The report was authored by the Turtle Conservation Coalition, an alliance of turtle- and conservation-focused organizations and many Year of the Turtle partners, including the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Turtle

Conservation Fund, Turtle Survival Alliance, Turtle Conservancy/Behler Chelonian Center, Chelonian Research Foundation, Conservation International, WCS, and San Diego Zoo Global.

At the top of the list is the Pinta Island Tortoise (*Chelonoidis abingdonii*), with only one individual male – “Lonesome George” – surviving today for this Galapagos species. Only a handful of individual turtles survive today for other species as well. For example, only four animals (three males and one female) remain for China and Vietnam’s Yangtze Giant Softshell Turtle (*Rafetus swinhoei*).

Inside:	page
Ask the Experts	2
Year of the Turtle Partners	3
International Marine Turtle Conservation Program	5
Turkey: Mediterranean Turtles	7
South West Turtle Conservation Network (Bangladesh)	8
Mesopotamian Softshell Turtles in Iran	9
Catching Turtle Fever—Mexico	10
Dr. Carl Safina on Turtles	12
Turtle Conservation in India	13
PARC Regional Spotlight	14



Turtles are being impacted by a variety of major threats, and many are gradually succumbing to these threats. They are being collected, traded, and eaten or otherwise used in overwhelming numbers. Additionally, their habitats are being increasingly fragmented, destroyed,

Continued on p. 6

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

Ask the Experts!

Are Snapping Turtles “loyal” to a particular nesting site or location? Will the female return to the same nest, nest area, or side of the pond, or is nest site selection more random? I know of a nest site on a private pond from last year that was ransacked by predators. Would the turtle lay her eggs there again?

Alex Bailey
Biology Instructor, Natural Sciences Dept.
Alamance Community College
Graham, North Carolina

Alex,

Many species of turtles, including Snapping Turtles, exhibit a strong fidelity to previously used nesting areas. While some turtles may nest for years within inches of where they nested in prior years, others nest in the same general open-canopied area. These areas include exposed river banks, lake and pond shores, natural forest openings, or areas with thin, nutrient-poor soils where dense vegetation has difficulty becoming established. In all populations, a small percentage of the females opportunistically exploit newly created nesting habitat, whether it is created naturally or by humans. Human-created habitats such as along railroads, highways, gardens, agricultural fields, power line right-of-ways, and gravel mines will also serve as nesting areas for Snapping Turtles and other freshwater species if these areas are close enough to the aquatic habitat that the turtle calls home. Since there is no parental care once the eggs are laid, turtle nests experience a high degree of predation. Nest predation by mammalian predators is often particularly pronounced in areas with limited suitable nest sites, resulting in many nests being placed within a relatively small area.

*Al Breisch
PARC Joint National Steering Committee Co-chair*

Do you have questions about turtle biology or turtle conservation issues that you would like answered? Submit your turtle questions via email (yearoftheturtle2011@gmail.com), and we will select questions to answer in our upcoming newsletter editions. Please include your name and location in your email message.

Get Your March Calendar!



This month's calendar photo contest winner, Jelger Herder, is a part-time professional nature photographer from the Netherlands. He specializes in reptiles, amphibians and fish and works for RAVON (Reptiles, Amphibian, and Fish Conservation Netherlands). He photographed this young Leopard Tortoise (*Geochelone pardalis*) on July 28, 2007 while searching for reptiles in Mkhuze, South Africa. See this month's winner (above) and runner-up at www.parcplace.org/YOTYearoftheTurtleCalendarMarch.pdf

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

It's 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/yearoftheturtlephoto.htm.

Submit Your Citizen Science Projects

Are you involved with a turtle citizen program or have information on a specific project? Other turtle enthusiasts would love to hear about it in order to get involved as well! We are putting together a project list that will be available very soon, including such projects as the North Carolina Museum of Natural Sciences' **Neighborhood Box Turtle Watch** (www.naturalsciences.org/research-collections/citizen-science/neighborhood-box-turtle-watch) and the Fort Worth Zoo's **Texas Turtle Watch** (www.fortworthzoo.org/conservetxturtlewatch.html). 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!

Year of the Turtle Collaborating Partners

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



The Connecticut Department of Environmental Protection's Wildlife Division (CT DEP Wildlife Division) is a state agency that has developed a number of programs to manage wildlife and contribute to diversified and healthy wildlife populations throughout the state. The CT DEP Wildlife Division is engaged in a comprehensive outreach and education effort to make the public more aware of the wildlife that can be found throughout the state. In 2011 the CT DEP Wildlife Division also has made a commitment to inform Connecticut residents about the state's native turtles through monthly press releases, articles and species profiles in issues of the bimonthly magazine, Connecticut Wildlife, a children's art contest, and related events.

www.ct.gov/dep/wildlife

The Desert Tortoise Conservation Center in Las Vegas was created in 2009 when the San Diego Zoo partnered with the US Fish and Wildlife Service, the US Bureau of Land Management, and the Nevada Department of Wildlife to apply its expertise to desert tortoise conservation by managing basic husbandry and veterinary care, conducting health screenings, operating the pet desert tortoise pick-up service and offering callers to the Conservation Center tortoise care education. The San Diego Zoo Institute for Conservation Research is also using its experience in the reintroduction of wild animals to build upon previous desert tortoise translocation research and is implementing conservation research projects to help advance the science of population management for this species. www.sandiegozoo.org/conservation



SAN DIEGO ZOO
GLOBAL



The Gopher Tortoise Council was formed in 1978 by a group of biologists and others concerned about the range-wide decline of the gopher tortoise (*Gopherus polyphemus*). The Council offers professional advice for management, conservation, and protection of gopher tortoises; encourages the study of the life history, ecology, and management of gopher tortoises and other upland species; conducts active public information and conservation education programs, and seeks effective protection of the gopher tortoise and other upland species throughout the southeastern United States. www.gophertortoiseCouncil.org

The International Reptile Conservation Foundation (IRCF) is a member-based organization that actively pursues the conservation of reptiles and amphibians and the natural habitat and ecosystems that support them in a variety of capacities depending on the project or program. IRCF support may include funding, mobilization of volunteers, and/or logistical assistance. www.ircf.org



IRCF



The Mid-Atlantic Turtle and Tortoise Society (MATTS) is a 501(c)(3) organization dedicated to promoting the responsible herpetoculture of turtles and tortoises, supporting the study of chelonian natural history, and conserving Mid-Atlantic chelonian species and habitat. MATTS was founded in 1997 by a diverse group of concerned hobbyists and professionals in the Baltimore -Washington- Northern Virginia area, though more than twenty states are now represented. MATTS has multiple meetings per year, field trips, very active outreach-educational and adoptions programs, an impressive newsletter and website, and actively participates in donating to worthy chelonian causes. www.matts-turtles.org

The Rio Grande Turtle and Tortoise Club is an all-volunteer, nonprofit organization dedicated to the care, conservation and preservation of chelonians in New Mexico. We work with individuals, organizations, veterinarians and local, state and federal agencies to educate the public and to find suitable homes for chelonians in need. www.rgttc.org



Seneca Park Zoo provides engaging and educational experiences to give our community the motivation and skills to act as stewards of the environment. In celebration of World Turtle Day, on Sunday, May 22 the Zoo will invite visitors to learn why these animals are disappearing and what they can do in the conservation effort. Activities will include keeper talks, docent stations, hands-on activities for kids, and readings of *The Tortoise and the Hare*. We will host Tortoise and the Hare races, complete with costumes and prizes. www.senecaparkzoo.org

Turtle Foundation is dedicated to protecting and conserving endangered sea turtles. We focus on small projects that have a high probability of success. Our organization is primarily volunteers. In East Kalimantan, Indonesia, our nest protection program has resulted in 4 million hatchlings released to the sea since 2000. Our monitoring and research project in Cape Verde, West Africa protects female Loggerhead Turtles from being slaughtered as they come ashore to nest and works to educate and help the local community.



www.turtle-foundation.org

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. Our full list of partners can be found at www.parcplace.org/yearoftheturtlepartners.htm.

Turtles in the News

Lonesome George, the last living member of *Chelonoidis abingdonii*, is to be given two new potential mates in an attempt to finally produce offspring. Read the full story from the Telegraph at

<http://www.telegraph.co.uk/earth/wildlife/8274521/Will-Lonesome-George-finally-find-a-mate.html>

A proposal has been made in Vietnam to remove **Hoan Kiem Lake's giant turtle** in order to treat it for injuries believed to have been caused by fish hooks, pollution and attacks by other species of turtles. However, experts have raised concerns over the feasibility and methods of moving the turtle out of the lake for treatment. Read more from Viet Nam News at

<http://vietnamnews.vnagency.com.vn/Environment/208476/Endangered-turtle-to-be-removed-for-treatment.html>

The **BP Gulf oil spill** was a deadly time for sea turtles, as more sea turtles were killed or injured in the Gulf of Mexico in the months following the spill than in any similar period during the past two decades. Read the full story from the Associated Press at

http://news.yahoo.com/s/ap/20110126/ap_on_re_us/us_gulf_oil_spill_turtles

ScienceDaily spreads the word about the Year of the Turtle! The full press release can be accessed at

<http://www.sciencedaily.com/releases/2011/02/110202102117.htm>

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

Submit Your 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!

International Marine Turtle Conservation Program – U.S. Fish & Wildlife Service

By Earl Possardt, USFWS International Marine Turtle Program Officer



Legend	
●	West African Leatherbacks
●	Global Loggerheads
●	Pacific Leatherbacks
●	Global Hawksbill
●	East Pacific Green Turtle
●	Olive Ridley Arribada
●	General Marine Turtle Conservation

**MTCA Projects by Marine Turtle Initiative
2005-2009**

Locations of MTCA projects funded from 2005 - 2009.

The U.S. Fish & Wildlife Service’s international sea turtle conservation efforts have historically been greatly constrained by lack of dedicated funding and were confined to three high priority projects in Mexico: the Kemp’s ridley in the State of Tamulipas, a hawksbill project on the Yucatan Peninsula, and a black turtle project along the Pacific coast. In July of 2005 this all changed when the U.S. Congress passed the Marine Turtle Conservation Act (MTCA) of 2004 in recognition of the growing threats to marine turtles, their migratory nature which requires multinational conservation efforts, and the need for a dedicated funding source for international marine turtle conservation efforts. With an initial budget of \$100,000 in 2005, appropriations grew quickly to \$2,000,000 in 2010. The dedicated source of



Olive ridley arribada at Ostional National Park, Costa Rica. Photo by Dr. Roldan Valverde, Southeastern Louisiana University.

funding from the MTCA Fund has enabled the Service to take on an international leadership role and we now support over 40 projects in over 30 countries. During the period 2006-2010 the Service awarded 396 grants for a total of \$5,564,800 with \$8,415,000 in matching funds from grantees and partners.



The Turtle Foundation provides training to Cape Verdian soldiers patrolling beaches to stop the slaughter of nesting loggerheads on Boa Vista. Photo by Christian Roder, The Turtle Foundation.



School children observe the release of a tagged hawksbill turtle on Chiriqui Beach, Panama as part of a recovery effort to restore the Caribbean’s largest historic nesting population of hawksbills. Photo by the Sea Turtle Conservancy.

The global distribution of marine turtles and vastness of threats has required the Service to prioritize and focus our efforts on specific species, regional populations, and threats to be most effective and to have the most impact. We recognize that marine turtle conservation requires long term commitments of effort and resources. Consequently, most projects we support are multiyear and will likely go on for decades if they are to be successful, as has been the highly successful bi-national Kemp’s ridley project we have partnered with the Mexican government on since 1978. Priorities for the Service’s



Omani rangers deploy a tagged nesting loggerhead at Masirah Island, Oman—the site of the world's largest loggerhead nesting assemblage (40% of global loggerhead nesting). Photo by E. Possardt.

current international program include the Oman, Cape Verdian, and Japanese loggerhead nesting assemblages, leatherback nesting populations in the Pacific and West Africa, the Caribbean hawksbill population, olive ridley arribada (large synchronous nesting events) populations in Mexico, Costa Rica, Nicaragua and India, and East Pacific green turtle populations in Mexico. Supporting regional and global capacity building institutions for marine turtle conservation, such as the Indian Ocean Southeast Asian Marine Turtle Agreement, the Inter-American Convention for Sea Turtle Conservation and the International Sea Turtle Society, are also of

high priority. Summaries of marine turtle projects and additional information about the MTCA program can be accessed at www.fws.gov/international/DIC/species/marine_turtles/marine_turtle.html.



Gabon Sea Turtle Partnership members collect data on a nesting leatherback trapped by logs, an all too common occurrence on Gabon beaches. Photo by Gabon Sea Turtle Partnership.

Year of the Turtle encourages article submissions on Sea Turtle research, conservation, and education to be part of future issues of Year of the Turtle News. Please contact yearoftheturtle2011@gmail.com to contribute.

Turtles in Trouble, cont. from p. 1



*Very little is known about the Burmese star tortoise (*Geochelone platynota*), which is threatened by both the pet trade and a demand for meat. Photo by Brian D. Horne.*

developed on, and polluted. Of the 25 most endangered turtles in the report, 17 inhabit Asia. Illegal hunting of turtles in Asia for food, pets, and traditional medicines is a particular problem. Better enforcement of existing trade laws, habitat protection, and captive breeding are all keys to preventing these 25+ turtle species from going extinct while bolstering existing populations.

“The Turtle Conservation

Coalition’s report calls attention to this alarming and growing problem. Turtles play a significant role in our natural and cultural heritage, but we are on the verge of losing many of these unique creatures forever. The bad news is that all of the threats to turtles are directly or indirectly tied to human activities. The good news is that this gives us a chance to change the outcome. We started the Year of the Turtle campaign to teach people how to take action and help keep turtles as a common part of the ecosystem,” says Alvin Breisch, PARC National Steering Committee Co-chair.

Building on previous Top 25 lists from 2003 and 2007, the 2011 presentation of the world’s most endangered turtles is intended to raise a greater awareness about the critical survival status of these well-known animals that have thrived on our planet for millions of years, but who now face an extremely high extinction risk within our lifetimes. This list of

the most endangered turtles is aimed to be used as an effective guideline to set urgent priority actions for conservation and research on these species. Without decisive actions to safeguard the future of these turtles and other turtles worldwide, these important and charismatic animals could be lost forever.

The full “Turtles in Trouble: 25+ Endangered Tortoises and Freshwater Turtles” report can be downloaded at www.iucn-tftsg.org/top-25-2011/.



*The red-crowned roofed turtle (*Batagur kachuga*) is limited to a few isolated pockets along the Ganges and Brahmaputra River basins in India and Bangladesh and is listed as “Critically Endangered” on IUCN’s Red List. Photo by Brian D. Horne.*

Turkey: A Land of Turtles in the Mediterranean



By Dr. Serdal UGURLU, Veterinary Faculty at Istanbul University

Turkey has a very rich turtle population. Here it is possible to see a variety of land, freshwater, and marine turtles. For example, land turtles such as Greek Tortoises (*Testudo graeca*) and Herman's Tortoises (*Testudo hermanni*) can be encountered nearly everywhere. Freshwater turtles, such as Caspian Turtles (*Mauremys caspica*) and European Pond Turtles (*Emys orbicularis*), can be found in many small rivers of the country as well. Additionally, Turkey has some of the most important Mediterranean coastal habitat where marine turtles lay eggs. Thus, Turkey is very important for the continuation of Loggerhead Sea Turtle (*Caretta caretta*) and Green Turtle (*Chelonia mydas*) populations. Twenty nesting beaches are under the protection of the Turkish government along the Mediterranean coast. Here,

where rivers enter the sea, African Softshell Turtles (*Trionyx triunguis*) can also be encountered.

Many scientists and civil society organizations continue to work for the protection of turtle species in Turkey. At this time, there are no developed turtle rehabilitation centers in Turkey. There is no habit of consumption of turtle meat and eggs in Turkish culture. Turtles have been leading their lives for 100-200 million years. Unfortunately, however, in the last century, as in most of the world there are some environmental problems which threaten the future of turtle species in Turkey.

The main problems affecting the lives of land turtles include forest fires, burning of fields, artificial fertilizers, urbanization, and construction of highways. For freshwater turtles, specifically, decreased levels of water in rivers and lakes and insufficient refinement of industrial and residential drains are dangers which lead to decreases in survival rates of these animals.

While adult marine turtles live in the sea, every year they come to the coast to mate and lay eggs, where they need beaches approximately 40 meters wide (from sea to the land). Similar to many countries and despite laws for

protection, unplanned settlements, industrialization, agriculture, and tourism in Turkey destroy or at least lead to narrowing of these beaches. In addition, international nylon pollution, unconscious fishing, and pollution of seas with petroleum and chemical wastes all endanger the marine turtles living on our shores.

In order to better protect the turtles of Turkey, better shoreline planning and the education of environmental consciousness in children can be advised, because the rulers of the future (politicians, businessmen, farmers, and fishermen) are today's children. For them, knowing about the importance of turtles in the natural world today will be integral to conserving these animals for the future of the world.

Are You an Educator or Interpretive Naturalist?

We have been working to develop a collection of Year of the Turtle resources for teachers and naturalists. One great example is the **Adopt-a-Pond Turtle Curriculum** from the Toronto Zoo (www.torontozoo.com/adoptapond/turtleCurriculum.asp). 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.



Caretta caretta,
Loggerhead Sea Turtle
hatchling, launching itself
into the sea.

The Role of the South West Turtle Conservation Network in Conserving Marine and Freshwater Turtles in Southwestern Bangladesh

By Maksudur Rahman, Program Coordinator, Centre for Coastal Environmental Conservation in Khulna, Bangladesh



The Centre for Coastal Environmental Conservation (CCEC) recently initiated development of the South West Turtle Conservation Network (SWTCN) in Bangladesh involving local NGOs and educational institutes, including Khulna University. The main objectives of SWTCN are to promote governmental wildlife conservation acts and regulations, to encourage the creation of governmental agencies via an interrelated co-management approach, to raise turtle conservation awareness among educational institutes, traders, and consumers, and to take immediate action against trade and hunting of endangered turtles. Both marine and freshwater turtles are the focus of these efforts.

Marine Turtles: Bangladesh has nearly 710 km of coastline, but not all shores are suitable for turtle nesting. However, marine turtles do venture throughout the coasts. Five species nest in Bangladesh, of which the Olive Ridley and the Green Turtle are two species found in the Sundarbans mangrove ecosystem. All marine turtle species are Critically Endangered or Endangered (IUCN Red Data Book) due to illegal trade, the lack of turtle excluder device use by fishermen, lack of implementation of government regulation, and the absence of a clear conception about the importance of turtles among fishermen, communities, and government officials. The main

objective of SWTCN is to conserve marine turtles by raising awareness in stakeholders, communities, and policy makers.

Freshwater Turtles: Bangladesh once supported almost 10% (25 species) of the world's known turtle species: five were marine, two were land tortoises, six were softshell turtles, and the remaining 12 were freshwater turtles. During the 1980s



and 1990s intensive and unregulated collection for millions of dollars of commercial export virtually destroyed the viable natural populations of all the turtle species. Commercial export has been banned since 1998, but the trend of collection has not changed, though it has decreased in magnitude. A turtle trade survey was carried out between November 2009 and July 2010 to assess the population status of traded species. The numbers of collectors have been reduced significantly, as the turtle trade is now predominantly carried out by people

who have been traditionally involved for several generations. The network of suppliers is mostly confined in extreme confidentiality within the people of the same clan. Often, every single turtle that is found is collected and sold from these populations.

Turtle collection in Bangladesh consists of several stages – collectors/hunters (shikari), middlemen/suppliers (mahajan), depot owners (wholesellers, aaratdar), suppliers/retailers, and consumers. The same people often play different roles in this trade chain. Collection is carried out all over Bangladesh and brought to the trading centers, which are located in various locations of the country—particularly the southern districts of Bangladesh. Turtles collected in Bangladesh are transported alive and reach the traders through their widespread but secretive network. The middlemen/suppliers and depot owners offer advanced money (locally called dadon) to the collectors. The recent turtle trade survey also discovered that due to lack of supply of freshwater turtles to meet local demand, marine turtles have also become a commodity to supplement the domestic trade. Domestic trade may be putting the last pegs in the freshwater turtles' coffin in Bangladesh.

The most common species involved in domestic trade include *Lissemys punctata andersoni*, *Pangshura tecta*, *Morenia petersi*, *Aspideretes hurum* and *Aspideretes gangeticus*. The number of species is significantly low compared to the 17 freshwater turtle species traded in the late 1980s and early 1990s. This suggests that the diversity of the natural populations of freshwater turtles is primarily affected due to unregulated capture from nature in addition to other factors such as habitat destruction, land use change, and pollution. International export of live turtles is banned, but the soft cartilage of the soft-shelled turtles is dried and exported under the label “dry fish” to far eastern countries. Bangladesh also plays a

role in the transit of illegal shipments of soft-shelled turtle cartilage from India.

SWTCN understands that there is an urgent need to conserve the marine and freshwater turtles of Bangladesh. In order to ensure the survival of the turtles of Bangladesh and to aid in the establishment and growth of SWTCN, CCEC is pleased to have Turtle Idols made from Sundarbans honey wax and Turtle Wall Mats on sale among the Sundarbans tourist and markets. Please help to promote these important turtle conservation initiatives. For more information and to join SWTCN, visit www.ccecbd.org or contact Maksudur Rahman at ccec_bd@khulna.bangla.net.



Mesopotamian Softshell Turtles in Iran

By Asghar Mobaraki, Senior Expert for Reptilians and Amphibians, Department of Environment, Biodiversity and Wildlife Affairs Bureau, Tehran, Iran, amobaraki@yahoo.com



Author Asghar Mobaraki with a Mesopotamian Softshell Turtle.

There is a population of Mesopotamian Softshell Turtles (*Rafetus euphraticus*) occurring in a small part of Iran within Khoozestan province. Some of the most important parts of its range are along the border between Iran and Iraq. There are many important rivers in this area for *Rafetus euphraticus*, such as the Karkheh, Dez, Karoon, Djarrahi, Shahoor, and Bahmanshir Rivers, as well as the related drainages of these rivers. Shadegan International Wetland (Ramsar Site) is also considered an important habitat.

The most common local name for *Rafetus euphraticus* is “Rafesh.” In some locations the turtle is also known as “Righal.” Until recently, Rafesh was a relatively unstudied

species in Iran. Considering the lack of biological data available and to determine the exact situation of the species in the area, the Reptilian Section of the Biodiversity and Wildlife Bureau of the Department of the Environment (DOE) of Iran, in cooperation with the provincial DOE office, have initiated a study of this species. The focus of the work has been collecting data on the main habitats, distribution, morphology and size, and threats surrounding this species. Based on biometric data collected from about 20 turtles, the largest size recorded was approximately 70 cm of curved carapace length and 20 kg in weight. Rafesh is a very greedy carnivore and attacks most anything that looks like food. Fish is one of the main food resources. Basking is the most common behavior observed in *Rafetus euphraticus*, and burying in the mud and the sand is also another recorded behavior.

Pollution, including debris, oil, and urban/agricultural sewage, fisheries by-catch, habitat destruction, and lack of awareness among local people are the most important threats to this species. Other pollutant threats include wastes from industrial sources like sugar cane factories that directly enter the habitats. Following these studies, we also plan to develop semi-captive rearing centers.

Catching Turtle Fever

Story and Photos by Elke Wind, Northwest PARC Co-chair



When I finally made the decision to join a Mexican friend (a fellow biologist) on a trip through the state of Oaxaca over the winter holiday I didn't expect to come back with turtle fever. We only have one extant native species of freshwater turtle in British Columbia, and sea turtles are rarely seen in the waters off of our coast. But as the co-chair for Northwest PARC I had been spending more time thinking about turtles in 2010 than ever before. So, when I learned in my travel preparations that the national Mexican Turtle Centre (Centro Mexicano de la Tortuga) is in Oaxaca and that many of the local beaches are marine turtle nesting sites, I made sure we visited the area.

The Mexican Turtle Centre is located in the small town of Mazunte (population 702) on the Pacific Coast. Some sources state that



Elke posing with an injured Hawksbill receiving veterinary treatment before it was released back into its tank.

“Mazunte” is derived from a Nahuatl phrase, “maxotetia” which means “please deposit eggs here.” Seven of the eight marine turtle species come to the Mazunte area to lay their eggs. Thousands of Olive Ridley turtles arrive en masse to lay their eggs in nearby Escobilla Bay. The nesting season generally begins in May and lasts for several months. Although an endangered species, the turtles come to the beach in large numbers for a few nights after a full moon. These events are called arribadas. Other turtles that lay eggs here are the Hawksbill turtle, the “prieta” (a subspecies of Green turtle), and some Leatherback turtles.

In 1997, about 900,000 sea turtles came to La Escobilla beach alone.

Historically, the area was known for turtle harvesting—in the 1970s a turtle slaughterhouse was built in Mazunte, making the area the center of sea turtle exploitation and creating a town largely dependent on the trade of turtle meat and eggs. Legally about 30,000 animals a year were killed, but some environmentalists believe the number may have been much higher due to illegal poaching. In the 1970s the Pesquera Industrial Oaxaca became concerned with the over-exploitation of sea turtles and proposed a more sustainable sea turtle industry that included captive rearing and the monitoring of commercial activities. Although the government prohibited egg collection in 1971, it was largely ignored. By 1988, the number of nests had dropped to less than 100,000. The trade in turtle meat and eggs was banned by the Mexican federal government in 1990. While this led to increases in nest number it also caused most families to lose their primary source of income. Government and private organizations worked to provide economic alternatives for the local community. The federal government



Tourists to the area participate in a hatchling release at a local beach.

Catching Turtle Fever, continued

established the Mexican Turtle Center to promote sea turtles as a base for tourism. The community worked with NGOs to develop a plan to educate locals about the environment, reforestation, and ecotourism. For example, The Body Shop worked with locals to distribute cosmetics made in the area using local ingredients. The community has declared itself a “Reserva Económica Ecológica Campesina” (Peasant Ecological Economic Reserve) as it has stopped hunting turtles and their eggs and is now working towards preserving them. The number of turtle nests increased from 60,000 in 1988 to nearly 700,000 in 1995, and this number continues to rise.

The Turtle Centre covers a 4-ha area and displays numerous sea and freshwater turtles as well as tortoises. It also includes an aquarium/museum. The Centre conducts research into techniques that help manage, increase, and preserve native turtle species, it provides educational opportunities, and it promotes ecotourism based on turtles. The facility receives 60,000 visitors a year. Volunteers from the Centre also monitor local beaches. When females come onto the beaches at night, generally just after a full moon, they

are measured, tagged and their eggs collected for incubation at the center. Hatchlings are released back into the ocean from the same beaches where they were collected. And that’s where I caught turtle fever.

A few days after I visited the turtle centre I heard of a hatchling release at a local beach called Playa de Ventanilla just north of Mazunte. I caught the local transport called the “collective” (a pickup truck with benches put in the back) up to Mazunte just before sunset—hatchling turtles leave the nest at dusk or at night to reduce the risk of predation. I arrived early and enjoyed a few minutes walking on the beach and watching the sun sink lower towards the horizon. Slowly people started to gather, and I noticed that many were wearing white t-shirts with ‘S O S’ written on them in turtle-shaped lettering. For \$10 I bought a t-shirt and was inducted into the hatchling turtle release group. After a 15-minute talk about marine turtles by a volunteer with a hatchling flapping in hand we were asked to line up behind a line drawn on the sand about 15 m parallel to the breaking surf. We stood excitedly waiting for a little hatchling to be placed gently in our hands. Once they were all distributed we all bent down and on the count of three we let our little hatchlings

go. We watched with excitement as each of the hatchlings made its way to the surf at its own pace. When the first hatchling finally made it to the water and got caught up in a wave we all cheered. Everyone watched and cheered right until the very last hatchling was tumbling along as it was swept into the sea by a wave. I know this was an experience that I will always cherish, and based on the excited voices, laughter, cheers, and smiles I saw on the families and kids in the crowd they were also rewarded with a case of turtle fever.

Volunteers Needed: Eastern Massachusetts Turtle Surveys from March – June

Surveys targeting habitat of Eastern Box, Wood, and Blanding’s turtles are being organized by Erin Snook, Community Outreach Coordinator, Sudbury Valley Trustees, AmeriCorps MassLIFT Member. She needs your help! Please contact her if you can join the effort (esnook@svtweb.org). Data will contribute to the Year of the Turtle USA Turtle Mapping Project!



*The Centre houses a variety of turtles and tortoises, such as this female Painted Wood Turtle (*Rhinoclemmys pulcherrima*), many of which are endemics threatened with extinction.*



Eastern Box Turtle by Sudbury Valley Trustees member Dick McWalter.

“There’s quite a lot left” – Dr. Carl Safina

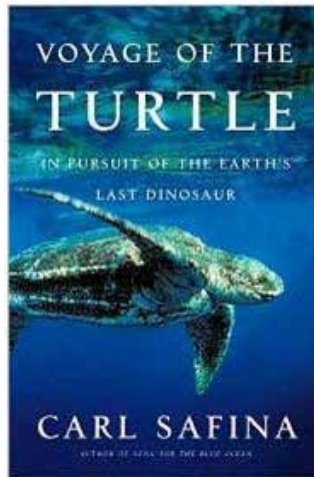
By Dede Olson, Research Ecologist, US Forest Service, and National Co-Chair, PARC

Turtles are “compelling and soothing,” said Carl Safina to me. He then looked up, his gaze like that of a child’s – honest, trusting, and soulful. He clearly has a spiritual connection with turtles, and an awe and compassion for them, I thought. Later during his banquet speech, he said “The compass of compassion shows not what is good for me, but what is good.” We were at the Wisconsin Wetland Association conference, in Baraboo, Wisconsin, where turtles had been discussed during the day, and Safina had been invited to speak to us after dinner, to give us dessert with a dose of science, philosophy, poetry, and conservation reality.



Leatherback sea turtle. Photo by Andy Adams

Carl Safina is one of the luminary writers of our day. He authored the acclaimed *Voyage of the Turtle*, among other works. His new book on the Gulf Oil Spill is due out soon, and I anticipate something on turtles in that as well. He is known as being an artful weaver of science, natural history, and conservation issues. He has a knack for telling stories of our careless dance with our precious natural heritage, the fall-out from that dance as we rearrange Earth to our own short-sighted purposes, and the glimmer of hope for ecological



redemption as we slowly turn our efforts and technologies to achieve natural resource sustainability. Hope is his by-line. He has it, and through his words, he gifts it to you. “We are borrowing heavily from people not yet born” he said to us as we viewed his slideshow featuring polar bears and penguins on shrinking ice, a baby albatross carcass filled with cigarette lighters, and a sea turtle in a fisherman’s net. His analogy of humans as being on a par with the volcanoes and meteors of past mass extinction events was sobering. However, “there’s quite a lot left,” he said to keep our minds from the downward spiral.

Voyage of the Turtle is the Leatherback’s story. Leatherbacks are

one of the five species of sea turtles. They are unique taxonomically and can be massive, weighing one ton. One that I saw on a nesting beach in Suriname was the size of a Volkswagon! They are the most widely distributed turtle. Safina states that Leatherbacks have declined 95% in the last 20 years in the Pacific Ocean. The upside is their rate of almost exponential recovery in parts of the Atlantic. Through Carl Safina’s lens on the world we see both nature’s majesty and a new paradigm for human-world relations. He sees our metamorphosis towards being nature stewards. I share the hope, and although the path is not easy, I think we are rising to the challenge.

“There exists a presence in the ocean, seldom glimpsed in waking hours, best envisioned in your dreams. While you drift in sleep, turtles ride the curve of the deep, seeking their inspiration from the sky. From tranquil tropic bays or nightmare maelstroms hissing foam, they come unseen to share our air.” Page 1, *Setting Course, Voyage of the Turtle* by Carl Safina, 2006, Henry Holt and Company, New York.

www.blueocean.org



Leatherback SeaTurtle at Galibi Nature Reserve in Suriname. Photographed in 1980 by Dede Olson.

Endangered Turtle Conservation in Northeast India: The TCRP Celebrates Year of the Turtle in Assam

By Chittaranjan Baruah, Coordinator, TCRP, Assam, India

At the conjunction of the Himalaya and the Indo-Burma biodiversity hotspots, northeast India is regarded as a major turtle conservation priority area. This region supports a remarkable 23 species of turtles and tortoises, making it one of the most diverse turtle faunas in the world. Since its inception in 2009, the **Turtle Conservation and Research Program (TCRP)** has initiated a freshwater turtle conservation program in the state of Assam. In 2010, TCRP started a community awareness and capacity building project for safeguarding the region's turtles, with programs to document diversity and abundance, nesting surveys and in-situ egg protection. In addition, TCRP recently launched an ex-situ habitat development project for certain threatened taxa.



Ex-situ turtle habitat improvement program of the TCRP. Photo by Chittaranjan Baruah.

A series of awareness campaigns (both oral and poster/brochure presentations) have been carried out in riparian village communities, including local schools, across Assam. TCRP celebrates "Endangered Species Day", "World Biodiversity Day," and "World Turtle Day" in different parts of Assam to educate the community in turtle conservation. Several events



Community awareness and capacity building for turtle nest protection.

are being organized to involve all age groups to excite them about the role of turtles in our environment. These celebrations helped organize a series of follow-up meetings during Year of the Turtle in an effort to save the regional turtle diversity. The TCRP has created dialogue with regional conservation organizations as well as local researchers in an effort to build strong partnerships and networks for a wider turtle conservation programme in the region. Training on various aspects of turtle biology and conservation such as survey techniques, egg collection, and hatchery management has been given to several student volunteers.

For Year of the Turtle, the TCRP has started organizing a series of awareness campaigns. The main aim of the program is to create awareness among the people of northeast India regarding the importance of biodiversity and turtle conservation. The activities include a series of popular talks on conservation biology among the local communities, environmental awareness programs targeting students and local communities, and extempore speech,

drawing, and painting competitions among the local school children. It is noteworthy to mention that northeast India is famous for flagship species like the Assam roofed turtle (*Pangshura sylhetensis*) and the Black Softshell turtle (*Nilssonina nigricans*).

For more information on turtle conservation programs in northeast India, visit www.ruffordsmallgrants.org/rsg/projects/chittaranjan_baruah and www.iucn.org/about/union/commissions/cec/?6105%2FTurtle-Conservation-Programme-Launched-by-CEC-Young-Professional. You can also reach Mr. Baruah and TCRP via email at tcrp.northeast@gmail.com.



The Assam Roofed turtle (*Pangshura sylhetensis*).

PARC Regional Working Group Spotlight: Box Turtle and Wood Turtle efforts among the conservation focus of NEPARC

Northeast PARC (NEPARC) has been hard at work on conservation issues surrounding turtles in the northeastern United States. This hard work has resulted in a multitude of products available to the public, as well as the formation of many working groups, including groups focused on Box Turtles and Wood Turtles. Within these efforts, NEPARC has created an educational brochure, *Your Backyard Guide to Helping Amphibians and Reptiles*, to provide homeowners with information on how to make their backyard a better habitat for wildlife (available at www.pwrc.usgs.gov/neparc/Products/Backyard.htm). A wealth of educational materials on Box Turtles, including a poster entitled *Please Don't Take Me Home*, have also been created to raise public awareness of box turtles and how taking individuals from the wild can negatively impact wild turtle populations (available at www.pwrc.usgs.gov/neparc/Products/



www.pwrc.usgs.gov/neparc/Products/Backyard.htm). In addition, the Wood Turtle Working Group (www.pwrc.usgs.gov/neparc/WorkingGroups/woodturtle.htm) has created a brochure about Wood Turtles to provide information on how people can help conserve this important species (available at www.pwrc.usgs.gov/neparc/Products/WoodTurtle.htm). Be sure to check the NEPARC website (www.pwrc.usgs.gov/neparc/index.htm) for future updates on these efforts as well as other recent NEPARC products.

NEPARC also hosted a great constituency at its 2010 Annual Meeting in August along the scenic Atlantic coast at Acadia National Park in Maine. More information on the meeting can be found at www.pwrc.usgs.gov/neparc/Meetings/index.htm. There you can also find registration and abstract submission information for the upcoming 2011 Annual Meeting, to be held August 17-18 at Arlington Echo Outdoor Education Center in Millersville, Maryland.




Follow all of the Year of the Turtle news and happenings on Facebook (<http://www.facebook.com/pages/yearoftheturtle2011>) and Twitter (<http://twitter.com/YearOfTheTurtle>).



Alison Haskell Award for Excellence in Herpetofaunal Conservation

Nominations are currently being sought for our new, annual cash award in memory of **Alison Haskell (1956 – 2006)**. The award is to recognize an individual in North America who exemplifies extraordinary commitment to herpetofaunal conservation, as did Alison. Alison studied turtles as part of her graduate work, and went on to become PARC's first ever Federal Coordinator. Sadly, her tenure was tragically shortened due to a valiant, but unsuccessful battle with ovarian cancer. Members of PARC aim to keep her memory alive through this annual award. **Learn more about the award, and Alison!**

Upcoming Meetings and Events

The Wildlife Society, Wisconsin Chapter, with Society of American Foresters. March 1-3, Wisconsin Dells, Wisconsin.

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

River Park North/Walter L. Stasavich Science & Nature Center “Going Green for Turtles St. Patrick’s Day-2011 Year of the Turtle” with Guest Speaker Jeff Hall, PARC Biologist. March 17, Greenville, North Carolina.

German Chelonia Group Annual Meeting. March 18-20, Gera, Germany.

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

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

The Wildlife Society, Washington Chapter, with Society for Northwestern Vertebrate Biology. March 22-25, Gig Harbor, Washington. Dede Olson presenting on Year of the Turtle.

Rare Pond Species Survey Techniques Workshop, April 2-3, Rohnert Park, California.

North Carolina PARC Annual Meeting, with NC Chapter, The Wildlife Society. April 5-7, Junaluska, North Carolina.

Northeast Fish and Wildlife 67th Annual Conference, April 17-19, Manchester, New Hampshire.

River Park North/Walter L. Stasavich Science & Nature Center “Sea Turtles” Program, with Guest Speaker Dr. Matthew H. Godfrey, NCWRC Sea Turtle Program Coordinator, April 28, Greenville, North Carolina

Heckscher Spring Festival. April 30-May 1, Long Island, New York.

River Park North/Walter L. Stasavich Science & Nature Center “North Carolina Turtles in Peril” Program, with Guest Speaker Jeff Hall, PARC Biologist, May 5, Greenville, North Carolina

World Turtle Day. May 23.

Second Mediterranean Congress of Herpetology, May 23-27, Morocco.

TSA Seed Grants: Announcing a Call for International Research Proposals

The Turtle Survival Alliance (TSA) has announced a request for proposals for grants in research and conservation actions that support specific tortoise and freshwater turtle projects and priority programs. For 2011, these include select work in Columbia, Indonesia, India, and Africa. For further information and application guidelines, please visit www.turtlesurvival.org/projects/grants-available.

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.