California Turtle & Tortoise Club

the Tortuga Gazette

Dedicated to Turtle & Tortoise Preservation, Conservation and Education

Volume 54, Number 6 November/December 2018

Alligator snapping turtle, *Macrochelys temminckii*. Photo by Gary M. Stolz, United States Fish and Wildlife Service. Public domain.

featured species

Alligator Snapping Turtle, *Macrochelys temminckii* (Troost, 1835)

North America's Giant Freshwater Turtle

by M. A. Cohen

Primordial in appearance and fierce in temperament, the alligator snapping turtle, *Macrochelys temminckii* is a formidable species. It is, by far, the largest freshwater chelonian species native to North America, as well as being among the largest freshwater turtles in the world, and it possesses a unique physical "lure" that it uses to attract and catch prey.

Officially described in 1835 by the Dutch-American naturalist Gerard Troost (1776–1850), the alligator snapping turtle received the species name *temminckii* in honor of Dutch zoologist Coenraad Jacob Temminck (1778–1858). Its genus name, *Macrochelys*, derives from two Greek root words, *macro-*, meaning large, and *-chelys*, meaning a turtle or tortoise.

A synonym for the genus name is *Macroclemys*, and even now this synonym is present in the literature and on the internet. However, the publication of the name *Macrochelys* occurred before that of *Macroclemys*, and therefore has priority (Ernst and Lovich, 2009).

M. temminckii belongs the Chelydridae, a small family of very large turtles that also includes the common snapping turtle, *Chelydra serpentina*. From 1835 until 2014, biologists regarded the alligator snapping turtle as the lone living species in the genus *Macrochelys*.

However, in 2014, a team of researchers officially described two additional *Macrochelys* species based on DNA evidence and certain physical characteristics. The Suwannee alligator snapping turtle, *Macrochelys suwanniensis* sp. nov.[1], is "restricted to the Suwannee River drainage of Florida and Georgia."

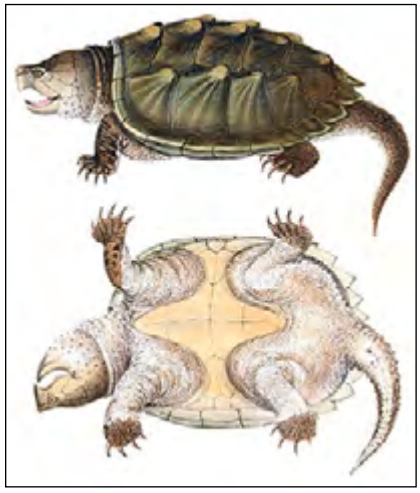
---

[1] **sp.nov.** is an abbreviation of the Latin phrase *species nova*, meaning a new species.

CONTENTS

North America's Giant Freshwater Turtle by M. A. Cohen 1
Turtletown: The Turtle Sanctuary of Max and Lillian Greene by Ralph Hoekstra 4
Mike's Turtle Net Picks by Michael J. Connor, Ph. D. 10
• Turtle Biologists Outline Ecological Repercussions of a World Without Turtles
The Turtle's Garden: Common Yarrow, *Achillea millefolium* 12
Galápagos Conservancy press releases 13
CTTC's Annual Holiday Giving 2018 14
Meetings and Programs 15
Russell A. Mittermeier: 2018 Behler Conservation Award Recipient 16

The Apalachicola alligator snapping turtle, *Macrochelys apalachicolae* sp. nov., is "restricted to river drainages bounded by the Choctawhatchee and Ochlockonee rivers in Florida, Georgia, and Alabama," according to Travis M. Thomas and his team in a paper published in the journal *Zootaxa* in 2014.



Hand-colored lithograph rendered by John E. Holbrook (1794–1871) in *North American herpetology; or, A description of the reptiles inhabiting the United States* published in 1842. Public domain.

Description

Weighing up to 249 pounds (113 kilograms), the massive adult *M. temminckii* measures up to 31.5 inches (80 centimeters) in carapace length. Reports of even larger individuals exist, but those reports are unconfirmed.

Generally dark-colored and rough-textured, the species' carapace features three prominent, spiked keels, one medial and two lateral ridges running the length of the carapace and adding to the prehistoric appearance of the species. Its carapace is generally covered with algae, adding to the camouflage of the turtle as it lies in wait while luring its prey.

Cross-shaped and minimized in size, the plastron of the alligator snapping turtle lacks a hinge, and its coloration ranges from pale to gray-brown in mature individuals, while, in juveniles, the plastron may be mottled with small white patches (Ernst and Lovich, 2009).

The pointed head of the species is huge and grayish-brown in color, with muscular jaws and a sharply hooked upper beak. The eyes of *M. temminckii* are encircled by rings of small, fleshy tubercles, and similar protrusions dot the sides and chin of its head as well as its neck (Ernst and Lovich, 2009). The species' tongue "lure" is described in the "Feeding and Foods" section.

The alligator snapping turtle's limbs are typically grayish to brown above and pale on the underside, and the limbs terminate in oversized claws (Wildscreen Arkive, n.d.). The tail is nearly as long as the carapace and has three rows of rounded protrusions on top and small scales underneath.

Sexual dimorphism in the alligator snapping turtle is conspicuous, with the adult male turtles being much larger overall and weighing up to twice as much as adult females (Ernst and Lovich, 2009).

Range and Habitat

Endemic to the southeastern United States, *M. temminckii* lives in all regional river drainages that empty into the Gulf of Mexico. Ranging from southeastern Georgia and the Florida Panhandle westward to eastern Texas, the species also occurs as far north as Iowa.

While it occasionally ventures into brackish environments, the alligator snapping turtle lives primarily in freshwater habitats in deep rivers and their larger tributaries; it is also found in bayous, canals, deep ponds, lakes, and swamps. Hatchlings and juveniles typically inhabit smaller streams (Animal Diversity Web, n.d.).

M. temminckii prefers habitats with abundant submerged vegetation that provides cover for the turtle's predatory activities. The species is highly aquatic; only egg-laying females regularly leave the water in order to nest, although males do occasionally bask.

Profile photograph of a "typically cranky [alligator] snapping turtle at Cahaba River National Wildlife Refuge in Alabama." Photo by Garry Tucker, USFWS. Public domain.

Feeding and Foods

Within the mouth of the alligator snapping turtle there is a unique prey lure that the turtle utilizes in its quest for food. A vermiform (i.e., worm-shaped) appendage located near the front margin of the turtle's lower jaw serves as a "fishing lure," attracting prey into the cavity of its open mouth. Attached to the lower jaw, the appendage wiggles at both ends. At rest this appendage is a grayish color, turning pink (mimicking a worm) when the turtle is actively seeking prey.

The only known turtle in the world that is equipped with an "oral predatory lure," the alligator snapping turtle waits quietly in the mud for the prey to investigate its "lure." Sensing the precise moment at which to snap its powerful jaws shut, the turtle traps its meal inside its mouth (Ernst and Lovich, 2009). Capable of staying submerged for 40 to 50 minutes at a time, the turtle lies motionless while hunting and surfaces only to take in air (Animal Diversity Web, n.d.).

A dietary omnivore, *M. temminckii* is both a hunter and a scavenger, feeding mainly on fish, also ingesting clams, crabs, crayfish, leeches, mussels, and snails. Other flesh foods include amphibians, birds, mammals, snakes, turtles, and small alligators. Plant foods include various fruits, grains, leaves, nuts, roots, and seeds. Being an opportunistic feeder, the species also consumes carrion (Ernst and Lovich, 2009).

Reproduction

The alligator snapping turtle exhibits temperature-dependent sex determination/pattern 2, abbreviated as TSD-2. Science broadly describes this pattern as female-male-female TSD, meaning that at both the lower and the higher incubation temperatures, female hatchlings emerge, while intermediate incubation temperatures in the nest tend to produce males (Ernst and Lovich, 2009).

Depending on geographical factors, mating in *M. temminckii* occurs in early to late spring. Nesting typically takes place once a season, but sometimes only in alternating years. Incubating from 100 to 140 days, clutches vary in size from eight to 52 eggs with 30 being the average number of eggs per clutch (Animal Diversity Web, n.d.).

Alligator snapping turtle with its mouth agape. Notice the vermiform "lure," the pink appendage at the front of its lower jaw. Photo © 2007 by LA Dawson. Source: Creative Commons; license: CC-BY-SA-2.5.

As they emerge from the nest in September or October, hatchlings resemble the adult alligator snapping turtles in many respects, including the dark, rough-textured carapace, small tubercles on the skin, and the long tail. Both males and females mature and become reproductively active between 11 and 13 years of age (Animal Diversity Web, n.d.).

Predators

Birds, large fish, otters, and raccoons prey on eggs, hatchlings, and juvenile alligator snapping turtles; alligators are also likely to prey on the young turtles.

Humans are the only predators of adult *M. temminckii*, which has historically suffered substantial exploitation for its meat, especially for the soup industry (Ernst and Lovich, 2009).

Threats

Because of various threats, alligator snapping turtle populations are in significant decline throughout their range. Among the threats impacting the species are commercial trapping for both the domestic and international meat markets, habitat alteration and destruction, and pollution and pesticide accumulation (Tortoise & Freshwater Turtle Specialist Group, 1996).

Conservation

Several states prohibit all commercial trapping of *M. temminckii,* while other states allow harvesting provided the necessary permits are obtained. Using "forensic genetic tools" it is now possible to identify the origin of turtle meats, determining whether the source of the meat is a protected watershed, which is illegal, or an area in which harvesting is legal with the proper permits (Ernst and Lovich, 2009).

The International Union for the Conservation of Nature's Red List currently categorizes the alligator snapping turtle as "vulnerable" while noting that this evaluation "needs updating" (Tortoise & Freshwater Turtle Specialist Group. 1996). CITES classifies *M. temminckii* as Appendix III, requiring nations to cooperate in the prevention of "unsustainable or illegal exploitation" for purposes of international trade in wildlife (Convention on International Trade in Endangered Species. n.d.).

REFERENCES

Animal Diversity Web. (n.d.). Macrochelys temminckii (Alligator Snapping Turtle). [online] Available at: https://animaldiversity.org/accounts/Macrochelys_temminckii/

Convention on International Trade in Endangered Species. (n.d.). The CITES Appendices | CITES. [online] Available at: https://cites.org/eng/app/index.php

Ernst, C. and Lovich, J. (2009). Turtles of the United States and Canada. 2nd ed. Baltimore, MD: The Johns Hopkins University Press, pp.138–150.

Tortoise & Freshwater Turtle Specialist Group. 1996. (errata version published in 2016). Macrochelys temminckii. The IUCN Red List of Threatened Species [online] Available at: http://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T12589A3362355.en

Wildscreen Arkive. (n.d.). Alligator snapping turtle (Macrochelys temminckii). [online] Available at: https://www.arkive.org/alligator-snapping-turtle/macrochelys-temminckii/

Turtletown

The Turtle and Tortoise Sanctuary of Max and Lillian Greene in Meiners Oaks, California

by Ralph Hoekstra

Lillian Benson was born in 1912 in Minnesota. Max Greene was born in 1904 in South Dakota. Both of their families moved from their farms in Minnesota and South Dakota to the Ojai, CA area in the 1920's. This is where Lillian and Max met. Max bought some land in Meiners Oaks in 1924 and, with the help of others, built their home. They married in 1929.

Their only child, Malcomb (Max Jr.) was born in 1930. Max Sr. died December 11, 1993 at age 90. Lillian died February 23, 1999 at age 87. Max Jr. died June 12, 2001. Max Jr. was diagnosed with cancer when Lillian Greene became ill, but postponed his own treatment in order to help his mother.

Lillian Greene is seated while giving a turtle talk, and Max Greene holds a desert tortoise. Photos courtesy of Jim Buskirk.

The entry of Malcomb Harvey (Max) Greene and Lillian Eugenia Greene into the turtle and tortoise hobby began in earnest when Max retired from his job in 1970 at age 65. The local Ojai newspaper reported this story in 1989. Their first tortoise was a desert tortoise that showed up in their garden, dragging a three-foot length of chain. They named him "Speedy."

Their time with tortoises, like many of us, began with a single desert tortoise. I remember reading a newspaper account of how Max would take a desert tortoise, probably "Speedy," for walks. The Greene's home became a sanctuary, and this desert tortoise was soon joined by other tortoises, either given to them by folks who found tortoises wandering on a road or given to them by the California Fish and Wildlife and by Animal Control. They were very proud that they received the permit to have desert tortoises.

Max and Lillian named their sanctuary "Greene's Turtletown" and made a sign with that name and hung it near the entrance to their yard. They welcomed visitors and gladly shared their thoughts and experiences with the visitors. I believe these visits began in about 1975 and continued even after Max Sr. died, until Lillian's health problems wouldn't allow for it.

Max and Lillian began collecting "exotic" tortoises in the 1970's, and soon they had a collection of around 200 box turtles and tortoises. A 1989 Ojai Valley newspaper article said that their collection included 20 varieties of turtles and tortoises. Max told the reporter that he estimates that they have cared for some 2,000 tortoises including all of the tortoises that they hatched.

The 1970's were an era when there were almost no restrictions on importing tortoises from all over the world. Their collection included many wild-caught Hermann's tortoises (*Testudo hermanni boettgeri*), marginated tortoises (*Testudo marginata*), Greek tortoises (*Testudo graeca ibera*), Russian tortoises (*Testudo* [*Agrionemys*] *horsfieldii*), leopard tortoises (*Geochelone pardalis babcocki*, now *Stigmochelys pardalis*), Sulcata tortoises (*Geochelone* [*Centrochelys*] *sulcata*), and radiated tortoises (*Geochelone* [*Astrochelys*] *radiata*).

The Greenes took advantage of the ease with which tortoises could be obtained. Lillian didn't tell me exactly how they obtained their exotic tortoises, but she did tell me about some of their backgrounds. She told me that her large and famous male marginated came from Yugoslavia, and that is why she named him "Yugo." Yugo ended up siring almost all of the marginated tortoises kept in California! Jim Buskirk, who has done many field studies of European tortoises, tried in vain to explain to Lillian that marginated tortoises can only be found in Greece.

This photo is believed to be Yugo, and was taken by the author during one of his visits.

Lillian told me a story about her Russian tortoises. The Russian tortoises became readily available in the market place in the 1990's, but during the Cold War were not being exported in the 1970's. She told me

that a Dutch university graduate student applied to the Soviet Union for a small group of Russian tor-

Photo of what is believed to be Mrs. Hags taken by the author during one of his visits

toises for him to do for a research study. The application was approved, but not until the researcher had moved on. Somehow Max and Lillian got those tortoises.

Visitors entered the property through a gate just off of the driveway. This led to the pen that was used to house their Leopard tortoises. On the occasion of this trip by the author, he took this photo of a pair that was mating.

Max, in an undated interview with the Ojai Valley newspaper, told the reporter that the Russian tortoises were by far his favorite tortoises. He named the large female "Mrs. Hags." She came to them with large sacs of skin that hung down in front of her rear legs. Mrs. Hags, at an estimated age of 70, went on to produce lots of babies. The same article mentioned the Greenes having a 100–year old male box turtle named "Vern" who fathered many offspring.

Max and Lillian acquired their radiated tortoises from the widow of Tom Lackey after he died. Max Jr. found canceled checks that Max and Lillian used to buy a pair of wild-caught adults and five juvenile radiateds. Their other adult female was hatched on their property from eggs deposited in a pen while the Greenes were caring for radiated tortoises belonging to someone else.

The adult pair that they purchased from Tom Lackey was imported from Madagascar, with others, probably in the late 1970's by someone who lived in Indiana. The source for this information was a telephone call with John Grigus, a breeder of radiated tortoises. Tommy Crutchfield told me in a telephone conversation that a man named Bill Minnick, who lived in Indiana in the 1970's, imported radiated tortoises.

Max and Lillian had a pair of adult Sulcata tortoises. The Greenes were among the first keepers of this tortoise species in California. The male was territorial and aggressive, and after Max Sr. died, he only allowed Lillian in his pen. The pair were kept at night in a steel storage shed, and, if Lillian hadn't opened the door when it wanted out, he would shove the door off of its track. Max Jr. was allowed to enter the pen to make repairs.

The Greene's home was situated on a large lot that provided room for their tortoise pens. Max, who was an electrician, ran electricity to the pens in order to heat the tortoises. Max used cement blocks to build the pens located in the front of their home to house their exotics and their box turtles. The desert tortoises were held in pens in the back of their home. With one exception, all of the species were kept in separate pens. The marginated and the Hermann's tortoises shared the main pen in front of their home.

This shed is where Max did his research and treatments of their tortoises. Photo by the author..

Lillian told me that they confronted many of the health problems associated with keeping wild-caught tortoises. There weren't many veterinarians in the 1970's who had the expertise to deal with chelonian health issues, and none practiced anywhere near them. She told Max that if they are going to

These pens were in the front of Max and Lillian's property. Photo by the author.

keep these tortoises, they better learn how to treat them.

Max heeded this advice and made a lab and a turtle hospital in the red shed next to their house. He bought a microscope and slides to collect specimens. He kept daily logs to keep track of his treatment regimens. He experimented with using human antibiotics to treat turtle illnesses, keeping track of dosages and duration of the treatment. Max probably got the medicines from his brother-in-law, a doctor. Max treated a box turtle that had infected inner ears, a common box turtle health issue. He told the reporter that he soon was able to save about 60% of the turtles and tortoises that had health issues. He also told the reporter "I do my doctoring at night."

Lillian gave numerous educational "turtle talks" to Turtletown visitors, often while seated under a canopy. This talk was a requirement before getting the tour of the sanctuary that was conducted by Max Sr. Lillian continued to do these talks and tours even after Max Sr. died. Lillian used photographs, shells and a turtle skeleton for these talks.

After Max Sr. died, Lillian continued not only to do these talks and tours, she also had to care for their collection by herself with the help of a local teen-aged boy who came every afternoon. This care included not only the animals outdoors, but also the incubators in her house that were full of eggs and the cardboard cartons holding baby tortoises.

A local grocery store delivered its surplus greens to her every afternoon. At night, she covered her tortoises with electric blankets during the cold months. All this went on even after she was stooped over suffering from osteoporosis! She quit using electric blankets when a tortoise scratched through one and started a fire. From then on, she covered them at night with ordinary blankets.

Early visitors to Turtletown included Jim Buskirk, Triple T Ranch owner Bob Thomas, Michael Connor and Dave Friend. Both Buskirk and Thomas had made their visits when Lillian still allowed visitors to enter their home. Both men told me that they saw many containers of baby tortoises wherever the Greenes could find a place to put them.

Photo sequence documenting the separation of conjoined twins. Photos by Max Greene Sr.

Max photographed some of his treatments. He was probably the first person to successful separate conjoined twins (two tortoises in a single egg, both connected to a single egg sac). He also used oxytocin to treat an egg–bound tortoise. Michael Connor told me that Lillian documented this event with an article in the *Tortuga Gazette*.

I first heard about the Greenes in 1991. I had been visiting other large collections to see the tortoises and to see how other hobbyists kept their animals. Most notable were the collections of Care Society members Peggy Nichols, Betsy McCormick, Jack and Mae Smith, Betty Caldarelli, Helen Cain and Sandy Veverka. I also visited Walter Allen's Casa de Tortuga many times. It was Betty Caldarelli who suggested that I go to Ojai and visit the Greenes, and told me that, if Lillian liked me, she may give me some baby tortoises. She also told me to bring some food for the tortoises.

My wife Jane and I made our first visit to Turtletown in 1991. Max Sr. was still alive and Max Jr. was there to help his dad with the tour. It was a hot day in August. Lillian was already busy with giving a talk to a group of visitors who had arrived before we did. Lillian then gave us her turtle talk and show-and-tell. Jane stayed in the shade in the talk area while Lillian gave me a tour. By that time, we had spent too much time in the heat and had to go home.

I called Betty Caldarelli when I got home to tell her of our visit. Betty told me that we left too soon, and we missed the part when Lillian would go into her house and bring out babies for us to choose. I also called Lillian a few days later to thank her allowing us to visit, and Lillian suggested that we come again on a day when it wasn't so warm. We accepted her invitation and visited her again, bringing lots of food for the tortoises.

On another visit, I got there in time to help Lillian open the doors of the tortoise houses. Just before noon she asked if I could go to the sandwich shop across the street to get sandwiches. I asked her what she wanted to eat and her answer was a grilled cheese sandwich—her staple every day. Then she gave me money for her lunch and mine, and she was quite insistent that I accept her money. This became the routine on all of my visits. I made up for this by bringing her even more food for her collection of tortoises.

I made some small tortoise houses for her to use in her house while

This is what a lucky visitor would see when visiting Turtletown: a carton of hatchling tortoises. Lillian would offer such a visitor the chance to pick out one or two babies to bring home! Photo by the author.

raising young tortoises indoors. She hadn't asked me to do this, but accepted them anyway. On a subsequent visit, she gave them back to me because she said she was too set in her ways to try something new. Betsy McCormick ended up with the houses.

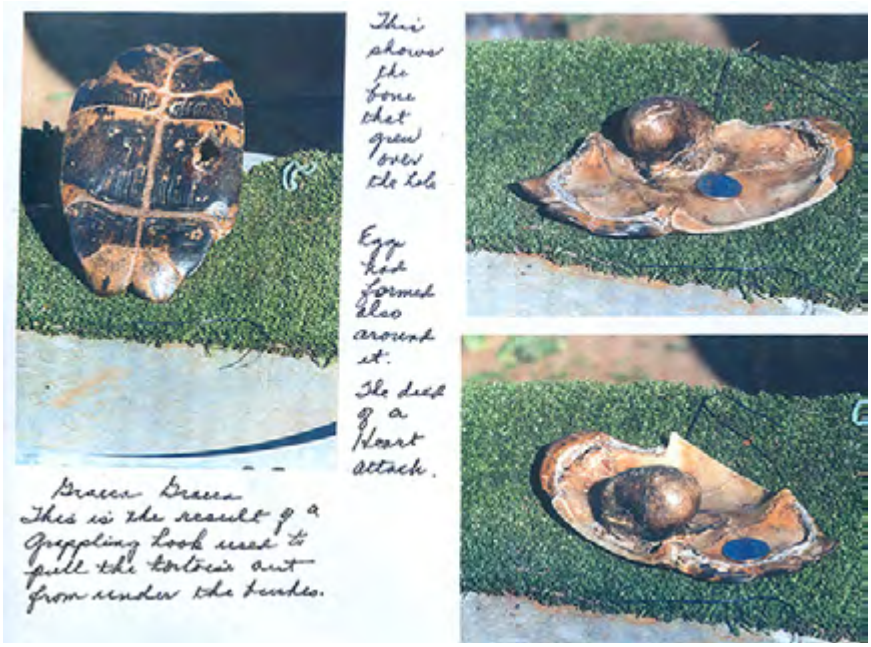
Lillian was concerned that her pair of radiated tortoises had not produced fertile eggs. The female nested but the eggs were infertile. I had read an article that said that male radiated tortoises needed to experience male-to-male combat in order to enhance their fertility.

I did some searching and found out that the Jersey Zoo had a surplus male. I contacted the zoo, told them of the situation with Lillian's pair and got permission from them to import the male. This idea came to a halt when the US Fish & Wildlife Service wouldn't approve the import permit stating that there are enough surplus males already in America.

He was right! The Bronx Zoo had two of them, and, when I asked Bill Holmstrom, the curator of Reptiles at the Bronx Zoo, about them, he agreed to give them to me. All I had to do was to pay for the shipping and to return the containers.

I called Lillian to tell her the good news. I brought the two males to her. One was too small to do any sort of combat. He went to the pen with the juvenile radiateds. I put the larger of the two in with her adult male. A one-sided combat episode soon started with Lillian's male pushing the new guy around like a beach ball. He soon joined the other male in the juveniles' pen.

During one of our phone calls I told Lillian that some Libyan Greek tortoises were available for sale from an importer in Florida. To my surprise she asked me to buy a pair for her. To her dismay, however, the pair soon succumbed to a disease. Lillian was in her 80's and still wanted to add to her collection.



This photo sequence displays shell damage due to the use of a grappling hook. It was used by Lillian during her show-and-tell talks. Photographs by Max Greene Sr.

Lillian had a very pleasant personality and liked the people who visited her collection. But she changed her mind about some people, who upon receiving a tortoise from her for free, went on to sell the tortoise soon after getting the gift. Lillian never charged anyone for her baby tortoises. They were a gift from her to fortunate Turtletown visitors. She diligently protected her permit from California Fish and Game which was issued on the condition that no sales of tortoises can occur when desert tortoises are on the premises.

The infirmities of old age caught up with Lillian, and she had to be hospitalized. During her stay in the hospital, an undetected sore on the back of her foot brought her close to death. Her son Max brought her to Sun City, Arizona where Lillian's sister lived with her husband, who was a retired physician. They cared for Lillian until she died.

While Lillian was hospitalized, Max Jr. and the teen-aged helper tried to take care of her collection of turtles and tortoises. Max asked for my help. I went to meet him at Turtletown.

We inventoried the collection and we made a list of Lillian's friends who kept similar species. I made a matrix for Max Jr. to show Lillian, and he let her know that this placement would be temporary until she regained her strength. Lillian did not approve this plan. She insisted that she would soon be healthy enough to leave the hospital and resume her life with the tortoises.

Even after she was moved to Arizona she still would not approve

A very happy Lillian with the author and her radiated tortoises, her original male and the male from the Bronx Zoo. Photo by Max Greene Jr.

a temporary move of her tortoises, much less a permanent one. In the end, most of my recommendations for who should receive the tortoises were implemented, with some exceptions.

My recommendation for the radiateds was for Max Jr. to sell them, but he replied that his mother never sold any tortoises and he was not about to do so himself. He told me that, if I wanted the radiateds, they were mine.

Max Jr. asked me to help with the distribution of the collection. I gathered up large plastic tubs and asked Rich Ayres and Michael Connor to help. Rich Ayres was to be the temporary keeper of the radiateds. Michael Connor was to be there to verify what we were doing in case anyone had suspicions of what was happening.

My son Brian, Rich, Mike and I drove to Turtletown in Rich's Chevy Suburban. We met Max Jr. and he told us that some people already took the marginated tortoises and the box turtles without first asking him. He knew who they were.

We placed the remaining tortoises into their tubs and loaded them into Rich's Suburban. We said our goodbyes to Max Jr. and got into the SUV. Rich had to make a U-turn, and we heard the swishing of water—almost all of the tortoises had urinated! We had to empty the urine from the tubs, rinse them out and replace the newspapers. We then loaded the tortoises back into the tubs and departed.

There were some tortoises that were never on exhibit or in the pens. There were about a dozen deformed tortoises that Lillian kept in her house. I had to add another adoptee/caretaker to the list to receive these tortoises. Pat and Mike Christianson gladly accepted these tortoises (along with a few "normal" ones). Mike is a licensed veterinarian, and both Pat and Mike share a love for animals of all kinds.

Max Jr. created a Certificate of Adoption for each person who received Lillian's tortoises, a document that listed the tortoises that were given to them. Max Jr. told me that he wasn't a "turtle person" and didn't want to keep any of the animals.

Max Jr. was retired from Shell Oil, where he worked as a geologist and had assignments in Alaska and Texas. Either by avocation or vocation, he picked up paleontology skills. When he was a teenager, he uncovered a fossil of a whale in a creek bed near Ojai.

He also made a hinged tortoise shell as a "show and tell" item for his mother which she used to educate visitors to Turtletown.

Max donated almost all of Lillian's turtle and tortoise knickknacks, jewelry and literature that included a complete set of the International Turtle and Tortoise Society Journals, to the Turtle and Tortoise Care Society Chapter. The sale of these items netted the chapter over $2,000^{00}$; 800^{00} of these funds purchased a great collection of reptile books for the Los Angeles Zoo. All of the books were stamped "Donated to the Los Angeles Zoo from the estate of Malcomb and Lillian Greene."

As I said before, Max Jr. was not a "turtle person". He was, however, a serious collector of antiques and artifacts. His collection included museum-quality items amassed over many years. A visit to his home was a treat! The first words out of your mouth were "These items should be in a museum!"

I am glad that I was able to help Max Jr. with this sad project of finding homes for his parents' turtles and tortoises. However, I

This photo, taken by the author, shows Russ Smith (left), then the Curator of Reptiles at the Los Angeles Zoo, receiving the gift of reference books from Max Greene Jr. (right).

must mention a tragic thing that happened to my tortoise collection because of my help. Max gave me a male Russian tortoise to breed with my female. He also told me to take back the two radiated males that were mine. I placed the Russian male in the pen that held my Russian female and also held my long-term Hermann's and marginated male. One night a rat entered the tortoise house at night and killed the Russian male. I could tell that it was a rat by the size of the tooth marks.

An outbreak of reptile herpes occurred in my collection, probably from the stressed Russian male. I was told that Russian tortoises are carriers of this disease, and, although it is dormant, it can become active if the tortoise is stressed. My other tortoises in the pen soon showed the symptoms of this disease, including the two Bronx Zoo radiated males who were in an adjoining pen. I called Mike Christianson and made an appointment with him to confirm my suspicions. Sadly, my suspicions were correct. All of the tortoises that were still alive that tested positive for the disease were euthanized immediately except for the larger of the two radiated males from the Bronx Zoo. Mike valiantly tried for months to save him, but to no avail.

I never got to meet Max Sr., but I have learned a lot about him. He was a pioneer in the treatment of turtle diseases. I have fond memories of my good friends Lillian and her son Max Jr.

I always had intended to write an article about Lillian. When I started talking with folks who knew her, I found out that I needed to dispute some misinformation and to counter rumors that were circulating. One example of these false beliefs was that Max Jr. sold off his mother's turtles and tortoises. Quite the contrary—he gave them all away!

What we who keep turtles and tortoises should take from this story is the need to have a plan for how to dispose of your collection before the time comes when you cannot take care of them.

I wish to thank Wendy Barker, Executive Director of the Ojai Valley Museum for her help. Wendy provided me with two articles that were published by the Ojai Valley News entitled: "Turtles find haven with the Greenes" and "So Happy Together." I also wish to thank Dave Friend, Jim Buskirk, Michael Connor and Bob Thomas, who regaled me with personal stories of their visits to Turtletown during the preparation of this article.

Special thanks to Ralph Hoekstra for researching and preparing this article. He is a past president of the CTTC Turtle & Tortoise Care Society (Long Beach). He has been a tortoise enthusiast for 40 years and has kept most of the tortoise species that are, or were, in the pet trade.

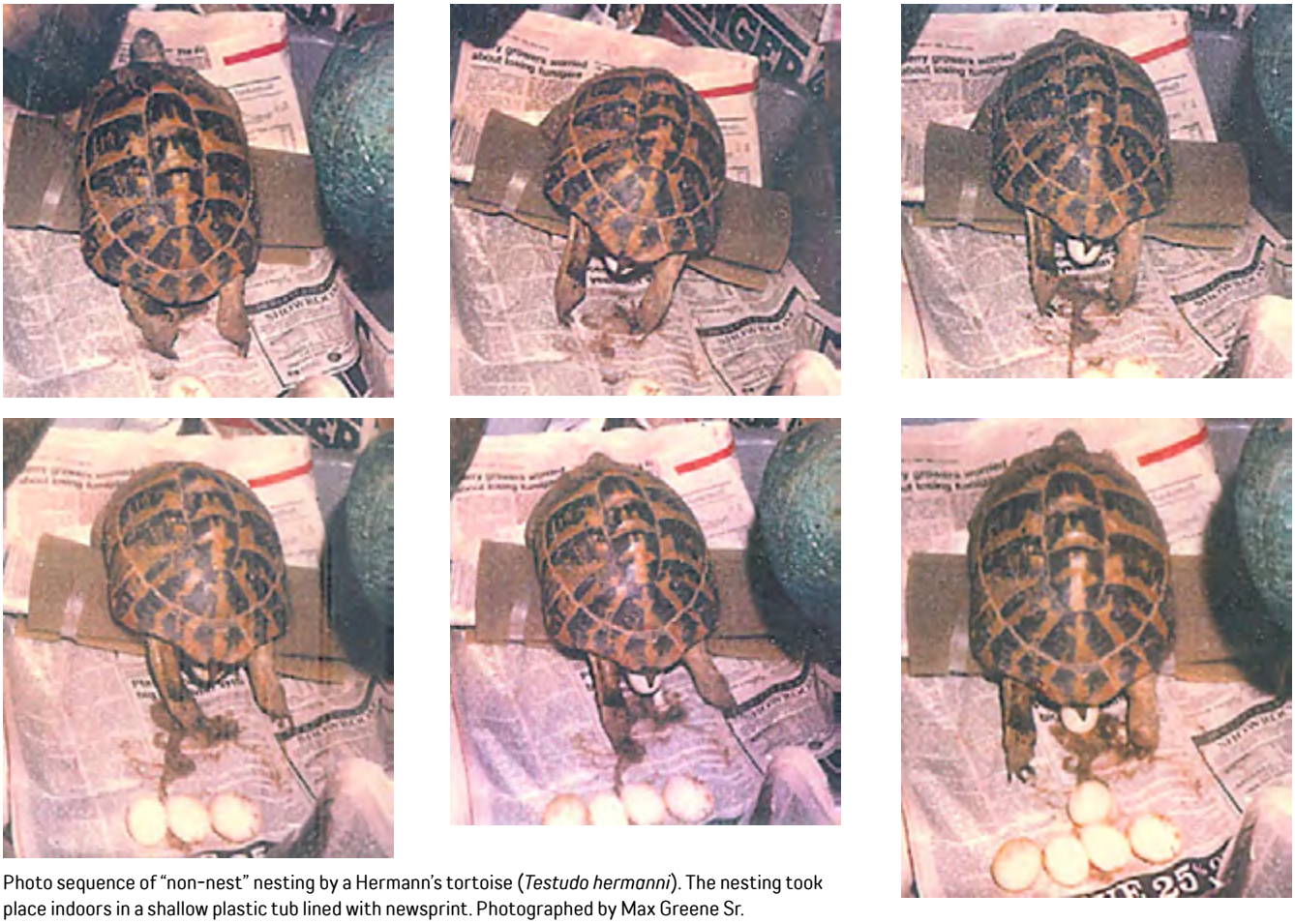


Photo sequence of "non-nest" nesting by a Hermann's tortoise (*Testudo hermanni*). The nesting took place indoors in a shallow plastic tub lined with newsprint. Photographed by Max Greene Sr.

Mike's Turtle Net Picks by Michael J. Connor, Ph.D.

A varied selection of recent articles, stories and sites on the Web that some of you may find as interesting as I did. This list is also posted at **tortoise.org/turtlenetpicks**

Galapagos Tortoise Theft | 123 hatchling Galapagos tortoises were stolen from the breeding facility on Isabela Island!

Utah Sulcata! | Reports have surfaced that *sulcata* are being abandoned to die at Red Cliffs Desert Reserve.

Stolen Radiated Tortoises Return to Australian Zoo | Two radiated tortoises stolen from Perth Zoo in 2013 have been recovered safe and sound.

Arkansas Expands Turtle Harvest Bucking trends to conserve native turtles, in response to a petition to ban commercial harvest Arkansas Game and Fish Commission voted instead to issue up to 150 turtle trapping permits despite there being only 35 trappers operating in the state.

Northernmost American Turtles? | New research paper concludes that snapping turtles are native to Cape Breton Island, Nova Scotia.

A Turtle by Any Other Name... | *Science Friday* podcast uncovers how exploiting nomenclature rules sowed confusion in alligator snapping turtle taxonomy.

Loggerhead Sea Turtles Hatch in Delaware | For the first time since 1973, a loggerhead sea turtle nested on a beach in Delaware and successfully produced hatchlings...

Kemps Ridley Sea Turtles Hatch in New York | ...meanwhile, 96 Kemp's ridley sea turtle hatchlings crawled out to sea from their nest on the Rockaway Peninsula in Queens, New York!

Hurricane Erases Whole Island | East Island, one of the larger islands of French Frigate Shoals and used as a nesting beach by green sea turtles, was wiped out by Hurricane Walaka

Green Sea Turtle Released off Seal Beach | Video and photographs of the release of "Jelly the green sea turtle" following her successful rehabilitation at the Aquarium of the Pacific.

Mexico Blocks Xcacel Beach Hotel Project (Again) | Mexico has denied permits for another proposed hotel development at Xcacel. The beach is a major nesting site for loggerhead, hawksbill and green sea turtles.

Six in 10 Turtle Species Are Threatened or Extinct | 61 percent of all modern turtle species are threatened or already extinct according to a new study by researchers from the University of Georgia, the University of California-Davis, the U.S. Geological Survey and the Tennessee Aquarium Conservation Institute.

Plastic Waste Kills! | Researchers found there was a one in five chance of death for a sea turtle who had consumed just one plastic item - rising to 50% for 14 pieces.

Video - Turtle Nursery Secrets | BBC Natures – Turtle Nursery Secrets from the Nest.

CTTC On Facebook | For breaking news updates, visit and "like" us on Facebook!

Turtle Biologists Outline Ecological Repercussions of a World Without Turtles

press release from Turtle Survival Alliance written by Jordan Gray

Charleston, South Carolina—19 September 2018—Daudin's Giant Tortoise. Floreana Giant Tortoise. Viesca Mud Turtle. Pinta Giant Tortoise. Reunion Giant Tortoise. In just the last 200 years, these five species of chelonian have disappeared from the Earth forever—and an unparalleled number of others are on the brink of following suit. Of the 478 recognized modern-day species and subspecies of turtle and tortoise, approximately 61% are threatened with or have already become extinct, making them the most endangered order of vertebrates. But, what does the loss of these animals which have inhabited the earth for over 200 million years mean for global ecology and the environments in which they reside?

In a new publication in BioScience entitled "Where Have All the Turtles Gone, and Why Does It Matter?" turtle biologists Dr. Jeffrey Lovich (U.S. Geological Survey), Dr. Whit Gibbons (University of Georgia), Dr. Joshua Ennen (Tennessee Aquarium Conservation Institute), and Mickey Agha (University of California-Davis) address these questions by synthesizing existing knowledge of the ecological role of chelonians and demonstrating quantitative and qualitative environmental impacts of large-scale population reduction and species loss.

Lonesome George, the last Pinta giant tortoise, (*Chelonoidis nigra abingdoni*), who died on 24 June 2012, causing his species to become extinct. Photo © 2007 by putneymark. Source: Creative Commons; license CC-BY-SA-2.0

"We are only beginning to understand the ecological value of turtles to the ecosystems we share with them. Given the rapid decline of many turtle populations, and the extinction of some species, we are racing against time to learn more about their place in the intricate machinery of nature," states co-author Dr. Jeffrey Lovich.

TSA President Rick Hudson adds: "This is an important and highly useful paper in that it summarizes the information we need to answer that oft-asked question 'what good are turtles and why should we protect them?' For all of us working to conserve turtles this paper is much needed and long-overdue."

Click **Where Have All the Turtles Gone?** to read the full paper.

SAVE YOUR REPTILES
ZOO MED
LABORATORIES, INC.
GET THE BEST FOR YOUR TURTLE
Turtle Dock
LARGE SIZE
Turtle Dock
Unique Floating Aquarium Dock For All Types Of Aquatic Animals
REPTIBATOR
DIGITAL EGG INCUBATOR
FEATURES
Turtle Dock™ Unique Floating Aquarium Dock For All Types of Aquatic Animals
Reptibator® Digital Egg Incubator
GOURMET
TORTOISE FOOD
Gourmet Tortoise Food
A food medley of Zoo Med's Natural Tortoise Food.
TURTLE CLEAN 50
EXTERNAL CANISTER FILTER For Aquatic Turtles
UP TO 50 GALLONS
QUALITY
TurtleClean™ External Canister Filter For Aquatic Turtles
ZOO MED LABORATORIES, INC.
3650 Sacramento Dr.
San Luis Obispo, CA 93401
Phone: 805-542-9988
email: zoomed@zoomed.com
www.zoomed.com

the Turtle's Garden
planting for chelonians
by M A Cohen

Common Yarrow (*Achillea millefolium*)

Foliage and blossoms of the common yarrow, *Achillea millefolium*. Photo © 2005 by Pablo Alberto Salguero Quiles. Source: Creative Commons; license: CC BY-SA 3.0.

Native to the temperate areas of the Northern Hemisphere, common yarrow, *Achillea millefolium*, is a member of the daisy family, the Asteraceae, also known as the Compositae.

Besides its extensive native distribution, common yarrow has been introduced, often as forage for livestock, into Australia, New Zealand, and elsewhere, naturalizing freely throughout many regions with mild temperatures.

The genus name of common yarrow, *Achillea*, derives from the name of Achilles, the hero of the Trojan Wars in Greek mythology, who reportedly used the plant to staunch the bleeding of wounded soldiers. Several of common yarrow's other common names refer to its historical use for stopping bleeding, including bloodwort [1], nosebleed plant, soldier's woundwort, sanguinary, and staunchweed.

[1] –wort: Used in combination with another word, the term –wort, meaning an herbaceous plant, denotes a plant used for food or for medicinal purposes.

Description

A mat-forming, herbaceous, evergreen perennial, common yarrow grows easily and rapidly, producing an abundance of flowers and attracting beneficial insects to the garden. With an upright growth habit, *A. millefolium* spreads freely through rhizomes, horizontal underground stems which produce lateral shoots that, in turn, form new plants.

A note of caution: some gardeners consider *A. millefolium* to be an aggressive species that may overtake neighboring plants. Despite this invasive tendency, common yarrow is an excellent choice for meadows, cottage gardens, rock gardens, flowering ground covers, wildflower gardens, and other informal plantings.

Finely-cut, fern-like, leaves are green or gray, grow 2.8 to 4.7 inches (7 to 12 centimeters) long, and have a spicy fragrance. Flower clusters, known to botanists as compound corymbs, are flattened or slightly convex groupings of 20 to 25 individual blossoms; each corymb is 2 to 4 inches (5 to 10 centimeters) across and sits atop a stalk that grows up to 3 feet (1 meter) tall. Common yarrow has a spread of up to 3 feet (1 meter).

A magenta cultivar of common yarrow. Photo © 2007 by Kenpei. Source: Creative Commons; license: CC-BY-SA-3.0.

The species flower color is white, with cultivars available in many colors, including cream, pinks, yellows, red, and bicolor pastels. Flowering typically occurs from April through September in the Northern Hemisphere.

Cultivation

Best grown in full sun, *A. millefolium* prefers sandy soil, good drainage, and moderate watering once established. Provide regular watering following the initial planting, after which the species will become quite drought-tolerant.

Deadheading, the removal of spent flower heads, will encourage rebloom and prolong the blooming season. To promote vitality, when clumps of common yarrow become overcrowded, dig and divide the individual plants in spring.

With its many positive qualities, common yarrow is a valuable addition to the garden: it attracts beneficial and predatory insects as well as pollinators, is deer- and rabbit-resistant, and its chemistry,

particularly the abundance of minerals in its leaves, improves poor soil. Additionally, *A. millefolium* is useful both as a cut fresh flower in season and as a dried flower for winter bouquets.

Edibility and Medicinal Uses

Common yarrow has been utilized by humans for many centuries. Culinary uses of common yarrow include young leaves minced in mixed salads, and fresh leaves served with fruit. Leaves can be cooked like other greens, and tea can be brewed from its flowers and leaves.

Native Americans called common yarrow a "life medicine," and modern science is investigating its efficacy as a treatment for numerous ailments.

REFERENCES

Brenzel, K. (2012). The New Sunset Western Garden Book. 9th ed. New York, NY: Time Home Entertainment Inc., pp.132–133.

Edible Wild Food. (n.d.). Common Yarrow, Achillea millefolium. [online] Available at: https://www.ediblewildfood.com/common-yarrow.aspx

Growers Exchange. (n.d.). Achillea millefolium (Yarrow). [online] Available at: https://www.thegrowers-exchange.com/Achillea_Millefolium_p/her-ach01.htm

Botanical illustration of common yarrow from *Flora von Deutschland, Österreich und der Schweiz* [translation: *Flora from Germany, Austria and Switzerland*] by Prof. Dr. Otto Wilhelm Thomé, published in 1885. Public domain.

Galápagos Conservancy press releases

Galápagos tortoises returned home following trafficking attempt to Peru

14 June 2018—After a lengthy stay in Peru following a wildlife trafficking attempt in April 2017, 26 young Galápagos tortoises were finally returned to the Islands. A technical team from the Galápagos National Park Directorate (GNPD) executed the necessary procedures to enter the tortoises into quarantine at the Galápagos Air Base on Baltra Island. They will remain in quarantine for six months in a specially-constructed corral within the Air Base, which has been set up to meet all of the conditions the tortoises require for optimal well-being during this period.

Specialists from the GNPD and Galápagos Conservancy reviewed the physical conditions of the tortoises and placed a subcutaneous identification device in each. The tortoises were active and healthy and did not hesitate to feed on chopped cactus provided by Park rangers.

Jorge Carrión, Director of the Galápagos National Park, expressed his gratitude to all the Ecuadorian and Peruvian institutions and organizations that made it possible to recover this group of tortoises that are part an important endemic species to the Archipelago.

§ § §

67 Tortoises Hatched from the New Floreana Breeding Program This Year

25 July 2018—A total of 67 tortoises hatched this year from the first nesting season of the new Floreana tortoise breeding program, which was started in March by the Galápagos National Park to "bring back" the extinct Floreana tortoise (*Chelonoidis niger*) using tortoises found on Wolf Volcano to have partial genetic ancestry with this species. The young tortoises are all healthy, and will eventually be released onto Floreana Island when they are five-six years old as part of a long-term program to repopulate the island with giant tortoises.

Map of the Galápagos Islands; in pink: distribution of Galápagos tortoise (*Chelonoidis nigra*) complex. Rendering © 2012 by Chucao. Source: Creative Commons; license: CC-BY-SA-3.0.

The Floreana tortoise went extinct on its home island approximately 150 years ago due to exploitation by whalers and other mariners for food, as well as hunting by the first settlers in the 18th and 19th centuries. Whether to lighten their load for the journey home or to make additional room for whale oil, mariners dropped a large number of tortoises from other islands at Banks Bay, at the base of Wolf Volcano. Scientists on an expedition to Wolf Volcano in 2015 found 19 tortoises with partial Floreana tortoise ancestry, which were transported back to Santa Cruz for the new breeding program.

The restoration of a tortoise population on Floreana Island with high genetic similarity to the island's original tortoise is part of a larger island restoration program, which includes the elimination of introduced mammals and the return of other species that disappeared from the island (such as the native snake and Floreana mockingbird).

From the Chair by Abigail DeSesa, Outgoing CEO

Annual Holiday Giving

Donations are the life blood of every non-profit or charitable organization, allowing them to fulfill their stated missions. CTTC is no exception. A wonderful woman named Marcella Blechman gave the CTTC the phenomenal ability to not only fulfill our missions, but assist others with theirs, by paying her generosity forward to fellow organizations supporting chelonians in need.

In October of 2018, the California Turtle & Tortoise Club's Executive Board, voted to give out donations in its Second Annual Holiday Giving. Twelve outside recipients received a total of $34,000^{00}$.

The following requirements had to be met to be considered for a donation from the California Turtle & Tortoise Club Executive Board.

- Recommended by an Executive Board Member
- Chelonian Related
- Current Charitable 501(c)3 Non-profit Organization
- Established and Reputable

Additionally, the Executive Board distributed a $1,000 to the Santa Clarita Valley Chapter for building safe holding pens for turtles and tortoises at their local animal shelter. Future donations to outside organizations, as well as distributions to our chapters, will be determined by these requirements, in addition to how well the California Turtle & Tortoise Club Executive Board's Investment Portfolio performs. The Investment Portfolio was created out of the Marcella Blechman Estate Donation received in the Fall of 2016.

As a Member, if you would like to recommend an organization that fits these requirements, please contact your Chapter's Executive Board Delegate for submission no later than July 1st annually. After vetting of the recommended organizations, the entire California Turtle & Tortoise Club Executive Board will vote on each organization and the amount they will receive, at the annual October meeting. The Annual Holiday Giving is subject to the annual performance of the Investment Portfolio.

Congratulations to the thirteen recipients that received donations in the Second Annual Holiday Giving for the contributions they bring to the chelonian world.

Annual Giving 2018

Recipient's Name	*Amount Awarded*
Turtle Conservancy (TC)	$ 6,000
Turtle Survival Alliance (TSA)	$ 4,000
Desert Tortoise Council (DTC)	$ 4,000
Long Island Turtle Rescue	$ 4,000
Turtle & Tortoise Preservation Group	$ 2,000
Tortoise Group	$ 2,000
The Desert Tortoise Conservancy	$ 2,000
Dr. Margaretha Hofmeyr (South Africa)	$ 2,000
Dr. Russell Burke, Hofstra U (Diamondback Terrapin)	$ 2,000
The Living Desert	$ 2,000
Dr. Stephen Dunbar (Sea Turtles)	$ 2,000
Southwestern Herpetologists Society	$ 2,000
Santa Clarita Valley Chapter Reimbursement Castaic Animal Shelter Turtle & Tortoise Holding Enclosure	$ 1,000
TOTAL GIVING	**$35,000**

Box Turtle Hibernation Ecology

T. P. Boucher et al. [2017, The Herpetological Bulletin 142:1–5] studied thermal ecology of the eastern box turtle (*Terrapene carolina carolina*) during the cooler months of the year (September–April) at the Mason Neck National Wildlife Refuge, Fairfax County, Virginia. The research enlisted individual male and female turtles tracked by radio telemetry. Observations were made on behavior and thermoregulation in relation to their effect as the turtles entered into hibernacula, moved during winter, and emerged in the spring. The authors found extensive above ground movements through mid- to late December and ground movements among hibernacula were more frequent than expected. Turtles emerged in late March and early April and, depending on the spring warm-up, the turtles remained close to hibernacula before undertaking characteristic spring movement and activity. The observed thermal characteristics of microhabitats appeared to affect and could predict varied behaviors and movements. While turtles in geographic areas where temperatures fall below freezing enter hibernacula during the winter, this study found this to be a generalization. The temperature profiles of specific microhabitats suggest a relationship between amount, type and degree of activity. In northern Virginia, the authors found turtles to be significantly more active than expected at temperatures that would otherwise suggest less movement. They entered hibernacula late, moved (relocated) dependent on environmental ambient temperatures, seemed to be subject to freezing during the winter, and emerged early.

Originally published in the *Bulletin* of the Chicago Herpetological Society 53(4): 102, 2018. Reprinted with permission.

Meetings and Programs

Click on your Chapter's website link for the latest program information. Programs may be scheduled after newsletter publication.

Chino Valley: 16 November; 21 December–no meeting

Foothill: 27 November–Dr. Alan Pollack; 17 December–Christmas Party Potluck [note the meeting date changes]

High Desert: 12 November; 10 December

Inland Empire: 2 November; 7 December

Kern County: 12 November; 10 December

Low Desert: 3 December

Orange County: 9 November; 14 December

Ridgecrest: 12 November; 10 December

Santa Barbara-Ventura: Contact the chapter for meeting information

Santa Clarita: 1 December—Annual Holiday Potluck and Bingo Party [note the meeting date change]

TOOSLO (San Luis Obispo): 14 November; 12 December

TTCS (Long Beach): 16 November–Dr. Michael Tuma; 21 December–Annual Holiday Party and Gift Exchange

Valley: 16 November; 21 December–Annual Holiday Potluck and Gift Exchange

Executive Board: Meetings take place at the Los Angeles County Arboretum in Arcadia, CA.

"I think I learned to appreciate and treasure each day, because you don't know how many you're going to be given."

—Sandra Day O'Connor (born 1930), Associate Justice of the U.S. Supreme Court (1981–2006)

Classified Advertisements

Classified advertisements run for one issue at 5^{00} for up to four lines. Ads are accepted at the discretion of the Editor. Classified ads are available to members and subscribers only and are run as a service to our members. California Turtle & Tortoise Club is not responsible for merchandise placed for sale in the *Tortuga Gazette*.

Please make your check payable to the California Turtle & Tortoise Club.

Please send ad fee to: CTTC *Tortuga Gazette*, attn Treasurer, P. O. Box 7300, Van Nuys, CA 91409-7300.

Mail fee with ad copy to the *Tortuga Gazette* mailing address; OR mail fee to the postal address above, and email the ad copy to the **Gazette Editor**.

California Turtle & Tortoise Club: a Society Dedicated to Turtle & Tortoise Preservation, Conservation and Education since 1964. Promoting and Facilitating the Care, Rescue and Adoption of Native and Nonnative Turtles and Tortoises.

Is your email address changing?
Update your email address through your MailChimp account by clicking the "Update Your Preferences" link on your newsletter notice. Or send your changes and corrections to **tgdistribution@tortoise.org**

The *Tortuga Gazette* (ISSN 1073-1334) is owned by the California Turtle & Tortoise Club Executive Board, which is incorporated in the State of California as a Not-for-Profit Corporation and is tax-exempt under IRS code 501(c)(3).

All material is copyright © CTTC unless otherwise attributed. CTTC policy permits reproduction of articles by other not-for-profit groups and educational institutions when permission is requested. Permission is granted on a case-by-case basis and CTTC must be cited as the source of the material.

Views expressed in the *Tortuga Gazette* are those of the contributors and not necessarily those of the Editor or the California Turtle & Tortoise Club.

Behler Turtle Conservation Award 2018

Russell A. Mittermeier

by Jordan Gray—*Turtle Survival Alliance press release*

23 August 2018—This year the 13th annual Behler Turtle Conservation Award celebrates and honors Russell A. Mittermeier for his half-century of dedication to science and conservation of turtles and primates, as well as being a world-leading global conservationist of the highest caliber. Russ has been a hard-core herpetologist since childhood, with a particular interest in turtles, snakes, and crocodilians. As an undergraduate at Dartmouth (where he and Anders met and formed a life-long friendship) and at graduate school at Harvard, he pursued work on turtles and primates and carried out field work in Panama, Tanzania, Peru, Colombia, Brazil, and Suriname. The work in Brazil led to a number of publications on Amazonian turtles, the most notable of which was the redescription of the Red-headed Amazon Sideneck Turtle (*Podocnemis erythrocephala*).

Chelodina parkeri Rhodin & Mittermeier, 1976, Parker's snake-necked turtle, photographed at the Bronx Zoo, Bronx, NY. Russell Mittermeier was involved in the official description of this species. Photo © 2006 by David J. Stang. Source: Creative Commons; license CC-BY-SA-4.0.

In 1989, Russ became President of Conservation International (CI), a position that he held for 25 years, switching to Executive Vice-Chair in 2014. At CI, he was the key figure in adapting Norman Myers' Biodiversity Hotspots concept as a core strategy for that organization for the next two decades, with hugely successful fundraising results. From Myers' original 10 hotspots, and then later 18, Russ and colleagues carried out research that eventually increased the number to 36. Russ also created the concepts of Megadiversity Countries and High Biodiversity Wilderness Areas as additional strategies for priority-setting, and also worked with several colleagues to adapt these and the Hotspots for turtle priority-setting as well. In addition, Russ has had a long history with International Union for the Conservation of Nature (IUCN). He has served as Chair of the IUCN Primate Specialist Group since 1977, and in 1979 began a process with Ed Moll and Peter Pritchard that resulted in the creation of the IUCN Freshwater Chelonian Specialist Group in 1981. He served as that new group's first Vice Chair under Ed Moll and has been on the Executive Committee of the combined IUCN Tortoise and Freshwater Turtle Specialist Group ever since, as well as a long-time and current Board member of Turtle Survival Alliance, Turtle Conservancy, Turtle Conservation Fund, and Chelonian Research Foundation. He was also present at the creation of the TSA in Fort Worth back in 2001. Other IUCN positions include the Steering Committee of the Species Survival Commission since 1982 and the IUCN Council from 2004 to 2012, and he was an IUCN Vice-President from 2008–2012. In December, 2017, Russ moved to Global Wildlife Conservation (GWC) to work with Wes Sechrest and Don Church, and is currently that organization's Chief Conservation Officer. His work there, as it has for the past 50 years, focuses heavily on tropical forests and primates, with a strong side interest in turtles, working with last year's Behler Award winner Peter Paul van Dijk, now at GWC as well.

Although he has been involved in the creation of many different funding mechanisms for biodiversity conservation and is a regular participant in conferences on subjects as diverse as climate change, biodiversity, protected areas, and of course primates and turtles, he is happiest when out exploring yet another rain forest, or searching for a rare primate or turtle or some other flagship species on his bucket list, or adding yet another country to his Travelology List, currently at 169 countries. Indeed, based on a bird-watching model, he created the concept of Primate-Watching and Life-Listing to stimulate global interest in these animals, and is in the process of trying to do the same for Turtle-Watching. He has almost certainly been to more rain forests than anyone else and seen over 90 species of turtles in the wild.

Russ is especially proud of his work in discovering and describing species new to science. He has been involved in the description of 20 new species (3 turtles and 17 primates), has had 8 named after him (two lemurs, one saki monkey, three frogs, a lizard, and an ant – but no turtles yet), and has collected several named by other people. His work has been recognized by many different organizations, universities, and countries.

He is a member of the American Academy of Arts and Sciences, has two honorary doctorates, one from Stony Brook and one from Eckerd College in Florida, was named a

"Hero for the Planet" by Time magazine in 1998 (an honor shared by previous Behler Award winner Peter Pritchard), and has received nearly two dozen awards, including the Gold Medal of the San Diego Zoological Society (1987), the Order of the Golden Ark from Prince Bernhard of the Netherlands (1995), the National Order of the Southern Cross from the President of Brazil (1997), the Grand Sash and Order of the Yellow Star (1998) from the President of Suriname, the Sir Peter Scott Award for Conservation Merit from the SSC (2006), and the Harvard University Graduate School of Arts and Sciences Centennial Medal (2017). In September, he will also receive the prestigious Indianapolis Prize for his leadership in global conservation efforts. Last but not least, Russ has for a long time been a trusted friend, mentor, facilitator, and partnership builder for many in the turtle and global research and conservation communities.

The Tortoise and Freshwater Turtle Specialist Group and Turtle Survival Alliance are honored to be joined again this year by the Turtle Conservancy and the Turtle Conservation Fund as co-presenters of the prestigious Behler Turtle Conservation Award, bringing together the four turtle organizations most closely tied to John Behler's legacy. This award would not be possible without the following group of dedicated and generous co-sponsors: Global Wildlife Conservation, Turtle Conservancy, IUCN Tortoise and Freshwater Turtle Specialist Group, Chelonian Research Foundation, Wildlife Conservation Society, Turtle Conservation Fund, Surprise Spring Foundation, Turtle Survival Alliance, Andrew Sabin Family Foundation, George Meyer and Maria Semple, Brett and Nancy Stearns, and Deb Behler.

Congratulations Russ, old friend—extremely well deserved! Anders G.J. Rhodin and Rick Hudson, Co-Chairs, Behler Turtle Conservation Award Committee.

To Our Members: May Your Holiday Season be filled with Hope, Joy and Peace

The California Turtle & Tortoise Club (CTTC) is a non-profit 501(c)(3) corporation. Contributions are tax deductible to the full extent of the law. Please pay by USA funds only (US bank check, money order, or International Postal Order).

Membership in the CTTC and subscriptions to the *Tortuga Gazette* are handled through the CTTC Chapters. The Chapters also manage membership renewals.

Many members choose to join a nearby Chapter to participate in Chapter meetings and other activities. Print membership forms from the **CTTC website.**

Your Chapter and your renewal date (month/year) are displayed on your newsletter notification. Mail your new or renewal membership/subscription to the Chapter of your choice.

Membership fees

- Student membership ..... 15^{00}
- Individual membership .... 25^{00}
- Family membership ..... 35^{00}
- Life membership ..... 500^{00}

Chino Valley Chapter: P. O. Box 1753, Chino, CA 91708-1753

Foothill Chapter: P. O. Box 51002, Pasadena, CA 91115-1002

High Desert Chapter: P. O. Box 163, Victorville, CA 92393

Inland Empire Chapter: P.O. Box 2371, San Bernardino, CA 92406-2371

Kern County Chapter: P.O. Box 81772, Bakersfield, CA 93380-1772

Low Desert Chapter: P.O. Box 4156, Palm Desert, CA 92261

Orange County Chapter: P.O. Box 11124, Santa Ana, CA 9271

Ridgecrest Chapter: P. O. Box 1272, Ridgecrest, CA 9355

Santa Barbara-Ventura Chapter: P.O. Box 3086, Camarillo, CA 93011-3086

Santa Clarita Chapter: P.O. Box 4012, Castaic, CA 91310

TOOSLO Chapter: P.O. Box 14222, San Luis Obispo, CA 93406

Turtle & Tortoise Care Society Chapter: P O Box 15952, Long Beach, CA 90815

Valley Chapter: P.O. Box 7364, Van Nuys, CA 91409-7364

the *Tortuga Gazette*
California Turtle & Tortoise Club
Post Office Box 7300
Van Nuys, CA 91409-7300
https://www.tortoise.org/