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CALIFORNIA TURTLE & TORTOISE CLUB

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A Florida box turtle (*Terrapene carolina* ssp. *bauri*) photographed in habitat on Big Pine Key, Florida. Photo © 2013 by jdwillson

featured species

Florida Box Turtle, *Terrapene carolina* subspecies *bauri* (Taylor, 1895)

The Florida Box Turtle by M. A. Cohen

The Florida box turtle is one of the six living species of the eastern or common box turtle (*Terrapene carolina*). It is endemic to peninsular Florida and southeastern Georgia in the United States. The full scientific name of the Florida box turtle is ***Terrapene carolina* subspecies *bauri***. Scientists may abbreviate subspecies as subsp., ssp., or omit it altogether. The name *T. c. bauri* is sometimes shortened to *Terrapene bauri*.

T. c. bauri is a member of the Emydidae family of hardshell turtles. The most sizable and diverse chelonian family, the Emydid turtles comprise at least 25 genera and 85 extant (i.e., living) species of freshwater, brackish-water, and terrestrial turtles. Emydid species include pond and marsh turtles, box turtles, and terrapins.

First scientifically described by American herpetologist Walter Edgar Taylor in 1895, the subspecies name *bauri* honors the German herpetologist Georg Baur (1859–1898) [Beolens et al., 2011].

Description

The Florida box turtle is a comparatively small species with distinctive and varied patterning

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on its high-domed carapace. Its carapace length ranges from approximately 4 to 7 inches (10 to 18 centimeters), and males are generally larger than females of the species.

Each turtle has a unique pattern of markings on its carapace. The patterns are some variation of a bright yellow starburst pattern on a black or brown background. These markings provide camouflage for the turtle in the vegetation of its habitat. See the photos on page 3 for examples of these diverse markings.

The plastron of *T. c. bauri* varies from solid yellow to solid black to a combination of dark and light patterning, for example, a dark starburst pattern on a light background or darker markings at the plastral seams.

The most distinctive feature of the box turtle's plastron is its flexible hinge, a structure enabling the animal to enclose its vulnerable head, limbs, and tail within its rigid shell for protection from predators.

The head of *T. c. bauri* is typically brown with solid or broken yellow lines and yellow speckling behind its eyes and along its neck. Its lower jaw and chin are usually lighter than the top of its head. Its limbs and tail are brown and flecked with little yellow dots and patches.

Plastron view of a *T. c. bauri*. Notice the prominent transverse hinge between the pectoral and abdominal scutes and the concavity of the plastron, indicating a male box turtle. **Photo © 2006 by Ineta McParland**

The Florida box turtle's beak and claws are very sharp to facilitate the capture of prey and the ingestion of fibrous food items. Its hind feet may have either three or four toes per foot.

Significant differences in appearance, known in biology as sexual dimorphism, exist between male and female *T. c. bauri*. The male tends to exceed the female in length and width. Males average 5 to 6.8 inches (12.8 to 17.3 centimeters) in carapace length, and females average 4.7 to 6 inches (12.1 to 15.8 centimeters) in length. The female carapace tends to be taller than that of the male. The added height likely provides more room for her eggs within her body cavity (Animalia, n.d.).

While Florida box turtles do not brumate, during the drier, comparatively cool parts of the year (November to February), they are inactive and difficult to find in the wild. The turtles become active when the weather is warmer and wetter (approximately March through October).

The tropical and subtropical temperature stability and warmth of their habitat means the Florida box turtle has a longer, more active annual cycle than other subspecies of eastern box turtle. The Florida box turtle is less tolerant of cold conditions than more northerly subspecies (Animalia, n.d.).

Range and Habitat

The Florida box turtle has the

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southernmost range of the four common box turtle subspecies native to the United States. It is endemic (i.e., limited in range) to mainland peninsular Florida, the Florida Keys, the nearshore barrier islands off Florida's west coast in the Gulf of Mexico, and extreme southeastern Georgia.

The species typically inhabits tropical and subtropical habitats with high humidity and ample water resources, including mangrove forests, hardwood hammock forests, wetlands, marshes, swamplands, and agricultural fields. However, the species also occupies more open, drier shrub-scrub-cactus habitats and shell barrens in southwestern Florida (Demetrio et al., 2022).

The Florida box turtle rarely enters bodies of water deep enough for swimming but frequents the shallows in which it hydrates and wallows.

Juvenile Florida box turtles gravitate to microhabitats with dense cover, ample leaf litter, and moist soil, while adults may occupy more open areas (Animalia, n.d.)

Researchers have documented the use of gopher tortoise (*Gopherus polyphemus*) burrows by Florida box turtles (*T. c. bauri*) in field studies conducted in southwest Florida. The box turtles remain in the gopher tortoise burrows for as few as several hours to as long as almost a week. The scientists found that tagged individuals in their studies sometimes returned to the same gopher tortoise burrow at intervals of a few months (Donini, 2021).

Food Preferences

The Florida box turtle is a true omnivore and an opportunistic feeder. Most frequently eaten are gastropods (slugs and snails) and low-hanging, fleshy fruits. The turtle also ingests insects, crustaceans, fungi, the leaves of vegetation (shrubs, herbs, and grasses), and carrion.

Scientists have conducted considerable research on seed dispersal by insects, birds, and mammals, but comparatively few studies exist about saurochory, the technical term for seed dispersal by reptiles.

"The eastern box turtle (*Terrapene carolina*) is recognized as a potential seed dispersal agent for many understory shrubs and herbs in temperate forests of eastern North America," according to a paper published by Lui and her research team in 2004.

Based on the scientists' study, because *T. c. bauri* favors fleshy fruits in its diet, they concluded that it is a major disperser of seeds within its range. After analyzing the droppings of the Florida box turtles in the study site, the researchers found that the bulk of their diet comprised fleshy fruits and terrestrial snails.

The box turtles then distribute seeds of their food plants (including shrubs, herbs, legumes, and grasses) during their foraging and mating travels. This seed-dispersal activity is especially beneficial when the turtles enter recently burned areas in order to forage on the tender new growth that sprouts following fires. Their droppings effectively "plant" seeds for revegetation of the burned area (Liu et al., 2004).

Reproduction

Both male and female *T. c. bauri* typically reach breeding age at 12 to 13 years of age. During the breeding season, each male and female may have multiple mating partners, a system known in biology as polygynandry.

Nesting season occurs from April through June. Females lay from one to nine eggs per clutch and

Examples of the diversity of carapace markings within the species *T. c. bauri.* All images were captured in habitat in Florida.

Photo © 2020 by krismoss

Photo © 2018 by ncanino_1932

Photo © 2022 by brettbaduch

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Florida box turtle hatchling. **Photo © 2013 by Srs01**

may lay as many as four clutches per year, although they may skip reproduction during some years (Dodd, 1997; Animalia, n.d.).

The incubation period runs anywhere from 45 to 120 days, and Florida box turtles are subject to temperature-dependent sex determination. Warmer incubation temperatures tend to produce more female hatchlings while cooler temperatures are likely to yield more males.

Threats and Conservation

T. c. bauri faces numerous threats to wild populations.

• Commercial exploitation, meaning collection for the pet trade, depletes the breeding-age adults within a population.

• Habitat degradation and destruction, primarily due to anthropogenic (related to human activity), results from residential and commercial development and pollution by agricultural chemicals.

• Road mortality, resulting from strikes by vehicle traffic and farm equipment, frequently happens as box turtles cross roads or fields while traveling from their nesting to their foraging grounds.

• Seasonal wildfires, occurring primarily in pine forests in south Florida, are a significant cause of injury and mortality among Florida box turtles. Rapidly burning fires in the leaf litter and wood debris frequently overtake the turtles whose locomotion is limited (Platt et al., 2010).

• Climate change resulting in rising sea levels directly threatens box turtle populations that live on islands and low-lying mainland areas.

Researchers conducting long-term field studies of *T. c. bauri* find that wild populations are declining even in nature preserves and other protected areas.

The IUCN Red List of Threatened Species lists the eastern or common box turtle species as Vulnerable. The CITES treaty lists the species in Appendix I.

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Florida box turtle photographed at the Sawgrass Lake park near St. Petersburg, Florida. **Photo © 2014 by Distinguished Reflections**

Unveiling the Migratory Mysteries of Galápagos' Giant Tortoises

— Galápagos Conservancy news release

13 November 2023—The iconic Galápagos giant tortoises, symbols of the archipelago, have fascinated scientists and nature lovers for centuries. Renowned for their impressive longevity and sheer size—tortoises can weigh over 550 pounds and live more than a century—their relaxed demeanor belies their ecological significance.

Wolf Volcano giant tortoise (*Chelonoidis nigra becki*). Photo © 2008 by Minglex

A Landmark Two-Year Study

In a groundbreaking study launched in August 2021, Galápagos Conservancy joined forces with the Galápagos National Park Directorate (GNPD) to monitor the migratory patterns of the giant tortoises (*Chelonoidis becki*) on Wolf Volcano, the archipelago's highest peak, standing tall at about 5,600 feet. State-of-the-art satellite trackers were affixed to three male and three female adult tortoises.

This two-year exploration shed new light on their behavior, taking into account seasonal variations in factors such as rainfall, availability of food, and Wolf Volcano's extreme temperature swings. The study also considered key biological rhythms, such as nesting periods.

The real-time data obtained from satellite tracking is of great help in directing our conservation efforts. It paints a vivid picture of how the tortoises relate to their environment and adapt across Wolf Volcano's varied altitudes.

Revelations From the Slow Lane

Despite their languid pace, these tortoises embark on seasonal migrations between feeding areas in higher altitudes and nesting areas in arid zones. Their movements are directly influenced by the seasonality of Galápagos, but climate change is rewriting these age-old migration scripts, casting shadows on the future well-being and survival of the species.

Beyond mere wanderers, giant tortoises are nature's diligent gardeners. Through their diet of fruits and other plants, they seed diverse flora across the islands, fortifying Galápagos' botanical health.

Dr. Jorge Carrión, our Director of Conservation, pointed out that their slow movement has a domino effect on the ecosystem. "Darwin's Finches feed on the parasites that live on the skin and the shell of the tortoises. In addition, tortoises influence the structure of the landscapes where they choose to rest and even affect the distribution of other species," he observed.

The study revealed that the tortoises on Wolf Volcano can traverse long distances of over 12 miles. Intriguingly, males and females chart distinct courses. Males venture to loftier altitudes of up to 3,940 feet and linger there, demanding more sustenance for their larger frames, while females typically stay within 2,625 to 2,950 feet of elevation.

Implications for Conservation

Understanding these behavioral nuances and ecological dynamics is critical for the conservation of giant tortoises, especially in an era marked by escalating human interventions and climate challenges. Ensuring unobstructed migration paths and nesting havens for these magnificent beings is paramount.

In unveiling the intricate tapestry of the daily lives of Galápagos giant tortoises, this study reinforces their pivotal role in the archipelago's ecological balance, underscoring the urgency to protect both the tortoises and the unparalleled Galápagos ecosystem.

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

Edible Succulents

Echeveria species
Echeveria, Hen–and–Chicks

A large genus of tropical succulent plants belonging to the Crassulaceae, the stonecrop or orpine family of plants, *Echeveria* species are native to Mexico, Central America, and northwestern South America.

First described by Swiss botanist A. P. de Candolle in 1828, the genus *Echeveria* honors Atanasio Echeverría y Godoy, a 17th-century Mexican botanical artist and naturalist. The correct pronunciation for the genus and common names is etch-ĕ-vĕr-ia.

The common name hen-and-chicks refers to how the new plantlets develop on the stem, clustering around the parent plant. As a single rosette matures, numerous side shoots typically sprout along its stem. Often called "pups" or offsets, these plantlets can be a source for the propagation of the species. See the section on propagation for more information.

Description

There are approximately 150 named species within the genus *Echeveria* and innumerable hybrids and cultivars, both naturally occurring and botanically bred. *Echeveria* species freely interbreed with other echeverias.

Echeveria agavoides. Photo © 2021 by Zoya Akulova

The thick, fleshy leaves of the *Echeveria* grow in a compact rosette shape, and the plant resembles a flower. Leaf colors may be pink to purple, blue-green, gray-green, or bicolored. The leaf shape may be simple, pointed, curved, or ruffled at the edges and tip.

Mexican snowball, *Echeveria elegans*, photographed at the Huntington Botanical Garden in California. Photo © 2018 by Eria Wei

Comparatively small in size, most species are ground-hugging, but a few shrubby species may reach 24 inches (61 centimeters) tall. Plants typically mature at 2 to 12 inches (5 to 30 centimeters) in diameter.

Echeverias flower in spring and summer, and their colors range from white to pink and red, yellow and orange. The star- or bell-shaped flower clusters grow on short stalks known in botany as cymes.

Cultivation in the Garden

Echeverias grown rapidly to their mature size. As with many succulents, cultivation of *Echeveria* is a simple process once the gardener provides its basic requirements. Succulent plants are structured to store water in specialized, sponge-like cells.

These water storage organs may be in the plant's leaves, stems, or roots, enabling the plant to survive in arid soil and air conditions. Their ability to store water and release it slowly for growth and maintenance makes succulents drought-tolerant.

Good drainage is essential because succulents will not tolerate "wet feet." Soil that is too wet for too long leads to root rot, which is fatal for the succulent. If planting directly in the garden, confirm that the planting site drains well and rapidly. If drainage is insufficient, add inorganic soil amendments such as coarse sand or perlite to promote better drainage.

Echeverias grow in various types of soils as long as drainage is good because they are adapted

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to arid conditions with sparse moisture and shallow soils lacking much organic matter.

Once established, apply water only when the soil is dry. Fertilizer is rarely required. If needed, use a low-nitrogen fertilizer formula at one-half to one-quarter the amount the label suggests.

Echeverias require ample sunlight to thrive, at least six hours of direct sunlight a day. They will tolerate light shade for part of the day if necessary. Without sufficient bright light, the *Echeveria* will lose its rosette form and grow "leggy" and elongated. Such malformation indicates that the plant requires more sunlight to grow properly.

The cyme (flower stalk) of *Echeveria peacockii*. **Photo © 2023 by Zoya Akulova**

Cultivation in Containers

Like many small and medium-sized succulents, *Echeveria* species grow well in containers provided the container has good drainage and an appropriate potting soil mix. Fill the container with a mix designed for use with succulents. As an alternative, adding coarse sand and perlite or vermiculite to an ordinary planter mix will increase the soil's porosity and promote good drainage.

Echeveria runyonii. Photo © 2011 by Barry Rice

Unglazed clay or terra cotta are the preferred materials for succulent planters. Glazed or enameled containers retain more water than unglazed pots and may keep the soil too wet for too long. Water succulents in glazed containers sparingly.

Light requirements for echeverias in pots are the same as those for outdoor garden plants. The species can also grow indoors with sufficiently bright light. A brightly lit window (usually a southern or western exposure) or an indoor grow light can provide the an appropriate light spectrum for plant growth and maintenance.

Propagation

Like many other succulents, echeverias are easy to propagate. The primary method of propagation is rooting a leaf cutting or an offset.

Cloning involves producing a new plant from a leaf cutting or from a whole offset. Both the leaf and the rosette will typically yield an exact duplicate of the parent plant, i.e., a clone of the mother plant.

Carefully remove a mature leaf from the parent plant by gently moving it from side to side and plant it stem-side down in a moistened cactus potting mix with added coarse sand, perlite, or vermiculite. An open-textured rooting mix promotes a strong root system. Water sparingly while the new roots form.

The process for propagating by rosette is essentially the same. Gently pull the offset away from the stem and proceed as described above. Keep the cutting or offset in indirect sunlight for a few months while its roots form and the new plant begins to grow because the tissues of the cutting or offset are too tender to survive exposure to direct sunlight.

Sometimes, a leaf or an offset will develop with an unusual color, uncommon form, or other unexpected characteristic. Amateur gardeners and professional plant breeders often try to propagate these atypical leaves or offsets.

Echeveria species are widely available from plant nurseries and garden centers. Retail and online nurseries specializing in succulents also carry many different varieties.

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New plant sprouting from a fallen leaf of *Echeveria pulvinata*. **Photo © 2015 by Salicyna**

Lawsuit Aims to Protect Pacific Sea Turtles From Fishing Gear

Fishery's Expansion Threatens Endangered Leatherback Habitat Off California

San Francisco, California—28 December 2023— The Center for Biological Diversity (CBD) and Turtle Island Restoration Network (TIRN) sued the National Marine Fisheries Service today for failing to protect Pacific leatherback sea turtles (*Dermochelys coriacea*) and their critical habitat from sablefish pot gear that can entangle and drown the endangered animals.

The West Coast pot fishery for the bottom-dwelling sablefish—also known as butterfish or black cod—is now allowed to fish in conservation areas off Oregon and California that have been closed since the early 2000s. Almost 2,000 square miles of the newly opened areas are in leatherback sea turtle critical habitat, including crucial feeding areas off California's central coast in the Cordell Bank, Greater Farallones and Monterey Bay national marine sanctuaries.

"It's horrific that hungry leatherback sea turtles have to navigate a vast maze of fishing pot strings after migrating thousands of miles to California," said Catherine Kilduff, an attorney at the CBD. "These areas have already been designated critical habitat for the sea turtles, and they shouldn't be a death trap. The federal government was irresponsible in rubber-stamping the reopening of these areas to dangerous sablefish pots. Leatherbacks are on the verge of extinction, and we can't let them be killed by commercial fishing gear."

Today's lawsuit asserts that the reopening is likely to increase endangered leatherback sea turtle deaths and harm their principal feeding habitat in central California. West Coast entanglements in pot fishing gear are a continuing threat to endangered leatherbacks. These massive sea turtles migrate from Indonesia and then along the West Coast to feed on jellyfish and other gelatinous prey.

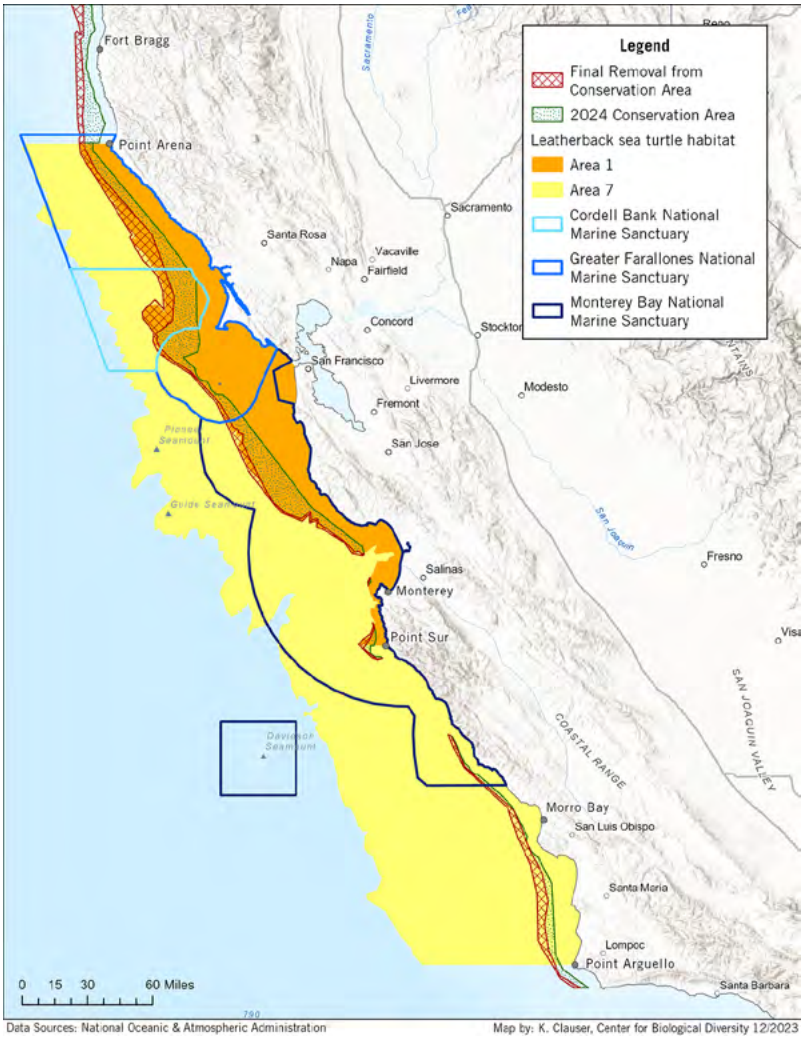

Figure 1. Leatherback sea turtle critical habitat in California consists of Area 1 in orange, the principal feeding area, and Area 7 in yellow, the secondary feeding area. The cross-hatch indicates conservation areas Fisheries Service recently reopened to sablefish pot fishing. Map by K. Clauser/Center for Biological Diversity.

The sablefish fishery uses 2-mile-long strings of 30 to 50 pots each, the ends of which connect to vertical lines ending at a surface buoy. According to a 2012 Fisheries Service analysis, the sablefish pot fishery is expected to kill or injure about 1.9 leatherback sea turtles every five years. Between 2015 and 2019, before this reopening, around that many leatherback sea turtle entanglements were traced to West Coast fishing.

"Leatherbacks are drowning horrible deaths or being seriously

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injured when they get entangled in pot traps and this must stop immediately," said Todd Steiner, ecologist and founder of TIRN. "With only a couple of thousand adult leatherbacks left in the Pacific, every single leatherback is critical to the survival of the species. Their fate is in our hands, and time is running out."

The lawsuit also argues the Service failed to reanalyze the sablefish fishery's impact when it reopened conservation areas in the leatherback's principal feeding waters. Recent science highlights the leatherback's continuing decline, and this action's reopening of fishing in the leatherback's designated critical habitat triggered additional legally required scrutiny of the action.

To make fishing safer, the Center has proposed that the Service require all fisheries that use pot gear to convert to new ropeless or "pop-up" gear within the next five years. The Center's petition requests that the agency prioritize the transition in national marine sanctuaries, which would benefit the leatherback sea turtles feeding in central California.

Most trap and pot fisheries use static vertical lines that can wrap around sea turtles' necks or front flippers, anchoring them to the seafloor and drowning them. Pop-up traps use lift bags or buoys on coiled ropes triggered by remote or time-release sensors to float the traps to the surface, eliminating static entangling lines.

The Dungeness crab and other crab pot fisheries are also threats to leatherback sea turtles. A leatherback was entangled and killed in November 2023 and entanglements were also documented in 2015 and 2016—all traced to Dungeness gear. Another dead leatherback was found entangled in rock crab pot gear in 2018.

—Center for Biological Diversity press release

The Leatherback Turtle

Excerpts from the Species Directory of the National Oceanic and Atmospheric Administration

The leatherback sea turtle is the largest turtle in the world. They are the only species of sea turtle that lack scales and a hard shell. They are named for their tough rubbery skin and have existed in their current form since the age of the dinosaurs. Leatherbacks are highly migratory, some swimming over 10,000 miles a year between nesting and foraging grounds. They are also accomplished divers with the deepest recorded dive reaching nearly 4,000 feet—deeper than most marine mammals.

The leatherback turtle has the widest global distribution of any reptile, with nesting mainly on tropical or subtropical beaches. Once prevalent in every ocean except the Arctic and Antarctic, the leatherback population is rapidly declining in many parts of the world. They face threats on both nesting beaches and in the marine environment. The greatest of these threats worldwide are incidental capture in fishing gear (bycatch), hunting of turtles, and collection of eggs for human consumption. The leatherback sea turtle is listed as endangered under the Endangered Species Act. It is estimated that the global population has declined 40 percent over the past three generations. Leatherback nesting in Malaysia has essentially disappeared, declining from about 10,000 nests in 1953 to only one or two nests per year since 2003.

A leatherback turtle surfacing for a breath of air near Indonesia. **Photo © 2022 by azure27014**

The Pacific leatherback turtle populations are most at-risk for extinction as evidenced by ongoing precipitous declines in nesting through their range. Primary nesting habitats of the Eastern Pacific leatherback turtle population are in Mexico and Costa Rica, with some isolated nesting in Panama and Nicaragua. Over the last three generations, nesting in this region has declined by over 90 percent. In the Western Pacific, the largest remaining nesting population, which accounts for 75 percent of the Western Pacific population, occurs in Papua Barat, Indonesia and has also declined by over 80 percent.

Registration Form for the CTTC 60th Anniversary Celebration

To register for the CTTC 60th Anniversary Celebration **by mail**, please print this Registration Form, fill it out completely, and mail it with a check for the fees to the address at the bottom of the form.

To register for the CTTC 60th Anniversary Celebration **online**, please click on this official registration link:
https://forms.gle/ArWHHUPdWqAuzgAN9

CA TURTLE & TORTOISE CLUB
60TH ANNIVERSARY SHELLABRATION

EVENT INFORMATION AND REGISTRATION

Please join us as we celebrate the 60th anniversary of the CA Turtle & Tortoise Club! The event is being hosted at the **DoubleTree Hilton in Norwalk** on **April 13, 2024**. We will enjoy a buffet lunch together starting at 1:30 pm and then have a series of presentations. Please note, the meal will be $35/person until Feb 13th. **After Feb 13th, the meal cost will increase to $45/person**. Limited edition T-shirts are being offered for an additional $15 each with registration. Every registered participant will receive a gift bag!
Questions: Contact Heather Ponek (turtletortoiseclubkern@gmail.com)

Full Name _____

Chapter _____

Total Number of People _____ (Including you)

T-Shirt Quantities _____ Small _____ Medium _____ Large _____ XL _____ 2X L

Email Address _____

Phone Number _____

OPTIONAL: HOTEL ACCOMODATIONS

You have the option to spend Fri and/or Sat night at the hotel for **$110 per night.**
Room availability is limited and first come, first served.
Please indicate below the **number of rooms per night** you would like to request.

_____ Friday, 4/12/24 _____ Saturday, 4/13/24

Registration Instructions
Please mail this completed registration form along with appropriate payment to:
PO Box 11124
Santa Ana, CA 92711
Check payable to: CA Turtle & Tortoise Club

Amount Calculation:
Participants ($35/$45ea): _____
Shirts ($15ea): _____
Rooms ($110ea): _____
Total: _____

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 online at tortoise.org/turtlenetpicks/turtlenetpicks.html

Highway Through Red Cliffs Under Reconsideration

Federal agencies agreed to reconsider authorizing a highway through critical desert tortoise habitat at Red Cliffs National Conservation Area.

Beaver Dam Wash Habitat Rehabilitation

Devastated by fire, multiple groups still have hope that the Beaver Dam desert tortoise critical habitat can be restored.

Can Desert Tortoises Survive in Nevada?

Overview of the ever-growing multitude of threats faced by desert tortoises.

Cal the Tortoise Returns

Volunteers from the local garden club revamped and reinstalled the tortoise sculpture at the west end of California City Boulevard.

Plastic Waste Affecting Galápagos Giant Tortoises

Like sea turtles and desert tortoises, giant tortoises on Santa Cruz Island are being impacted by plastic waste.

New *Cuora* Found in the Philippines

Turtles from Davao City, Mindanao, are newly described as the Philippine Box Turtle (*Cuora philippinensis*). With video in Filipino and English.

European Pond Turtle Victim of Grave Robbers?

The remains of a European pond turtle found in an ancient grave in Poland probably got there after the turtle fell into the grave after it had been reopened perhaps by grave robbing humans.

India to Pause Missile Testing Off Odisha During Olive Ridley Nesting Period

India's Defense Research and Development Organization will pause missile testing off the Odisha coast between February and March to protect nesting Olive ridley turtles.

Kemp's Ridley Washes Up on Welsh Beach

A young Kemp's ridley turtle, the second since 2021, is in rehab after washing up on an Anglesey beach.

Mediterranean Green Sea Turtles Nesting Range Expansion

New model predicts rising global temperatures could lead to a 60% increase in the nesting range of green turtles to include much of the North African, Italian, and Greek coastlines.

Do Sea Turtles Use Thermal Corridors to Cross the Pacific?

Video of Stanford scientists' efforts to test their hypothesis that sea turtles are using transient thermal corridors to get from Japan to the California coast.

Cape Hatteras Green Sea Turtle Nests Later Than Ever

On the morning of Dec. 3, a fresh Green Sea Turtle nest was found at Cape Hatteras, South Carolina. The previous late nesting record for the Cape and the state occurred October 31, 2020.

Earlier Sea Turtle Nesting May Not Offset Global Warming Impacts

FSU-led research shows shifting nesting timing may not be enough to prevent fewer sea turtle hatchlings and a shift to females.

Grupo Tortuguero de las Californias

Founded in 2007, Grupo Tortuguero de las Californias is a network of individuals and communities working to conserve northwest Mexico's sea turtles.

Marine Turtle Newsletter 166 Online

Latest issue of the Marine Turtle Newsletter is now available for free.

Fossil "Plants" Revealed to be Hatchling Turtles!

New research reveals that the unusual plant *Sphenophyllum colombianum* is actually an ancient fossil turtle, which researchers have nicknamed "Turtwig".

Turtle Survival Alliance Impact Report

Downloadable report of the TSA's work around the world in 2023.

Fish & Wildlife News Celebrates the Endangered Species Act

The Endangered Species Act became law on Dec. 28, 1973, 50 years ago.

Turtles Help Scientists Understand Skull Development

Researchers analyzed the expression of three genes involved in bone formation in 3 turtle species. Their findings may provide hints for the development of treatments for congenital diseases that cause abnormalities in human skull morphology.

CTTC On Facebook

For breaking news updates follow CTTC on Facebook!

The California Turtle & Tortoise Club CHINO VALLEY CHAPTER

TURTLE AND TORTOISE SHOW IN CHINO

SATURDAY, MAY 4, 2024
10:00am to 3:00pm

ADMISSION $2.00

**** LIVE EXHIBITS - EDUCATIONAL MATERIAL & DISPLAYS****
ADOPTION INFORMATION

CHINO GIRL SCOUT HOUSE
5007 Center Street, Chino, CA 91710
Come support our Chapter, fee supports our turtle care and vet expenses

From the 60 freeway exit Central Ave. and go south to Riverside Drive then go right. Take Riverside Drive to Third Street (1st signal) and turn right. The Girl Scout House in on the corner of Third and Center Streets

E-MAIL: jlcalif2@aol.com OR CALL LYNDA AT 909/263-4629 FOR MORE SHOW INFORMATION

"I have long understood that climate change is not only an environmental issue—it is a humanitarian, economic, health, and justice issue as well."

— Frances Beinecke (b. 1949)
American environmentalist

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.

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ZOO MED IS A PROUD SPONSOR OF THE TSA

ZOOMED.COM

A CRITICALLY ENDANGERED TORTOISE ENJOYS ZOO MED GRASSLAND TORTOISE FOOD

The Radiated Tortoise *(Astrochelys radiata)* is the 6th rarest tortoise in the world, and the heroes at Turtle Survival Alliance (TSA) are fighting for its future. As a non-profit, the TSA relies on support from the community. Zoo Med has pledged to donate pallets of their Natural Grassland Tortoise Food to TSA's Madagascar location 3 times a year. This food prevents shell and spinal growth deformities by matching the nutrient profile and high fiber content of a wild tortoise diet.

Join Zoo Med in supporting the TSA's conservation efforts; visit their website to learn more and how to contribute: turtlesurvival.org

TSA
turtle survival alliance

California Turtle & Tortoise Club Directory 2024

Executive Board

Important note: *The Executive Board is strictly an administrative body for the corporate portion of CTTC and does not handle animals or adoptions.*

Postal mailing address: **P.O. Box 7300, Van Nuys, CA 91409-7300.**
General Information: CTTCEBOfficers@tortoise.org
Chief executive officer: **John Kim**
Vice chief executive officer: **Robert Hazard**
Chief financial officer: **Virginia Doepping**
Secretary: **Heather Ponek**

Chino Valley Chapter

Postal mailing address: **P.O. Box 1753, Chino, CA 91708-1753.**
President: Lynda Misiak
Vice president: David Bowman
Secretary: Rachelle Buck
Adoptions: Jim Misiak
Meeting: In-person on the third Friday, 7:30 PM at Chino Girl Scout House, 5007 Center St., Chino, CA 91710.

Foothill Chapter

Postal mailing address: **P.O. Box 51002, Pasadena, CA 91115-1002.**
President: Joanna Bolt
Secretary: Mardy Graves
Treasurer/Membership: Jeanette Lea
Meeting: In-person meetings on the fourth Friday at 7:30 PM in the Palm Room, Los Angeles County Arboretum, 301 North Baldwin Ave., Arcadia, CA 91007.

High Desert Chapter

Postal mailing address: **P.O. Box 163, Victorville, CA 92392.**
President: Regene Fonville
Vice president: Dave Cheney
Secretary/Adoptions: Erica Schafer
Treasurer: Jose Zamudio
Meeting: In-person meetings on the second Monday at 6:00 PM at the Sterling Inn Regency Room, 17738 Francesca Road, Victorville, CA 92392.

Inland Empire Chapter

Postal mailing address: **P.O. Box 7205, Redlands, CA 92375.**
President: Gerald Rezes
Vice president: Richard Roosman
Corresponding Secretary: Amy Taylor
Treasurer: Gerald Rezes (acting)
Meeting: Hybrid meetings take place virtually via Zoom plus in-person on the first Friday, 7:30 PM at "The Ark" Church of the Nazarenes in the Fellowship Hall in Young Hall, 1307 East Citrus Ave., Redlands, CA 92374.

Kern County Chapter

Postal mailing address: **P.O. Box 81772, Bakersfield, CA 93380-1772.**
General information: KernCTTC@tortoise.org
President/membership: Heather Ponek
Vice president: Tim Brennan
Treasurer: Kathy Studer
Meeting: In-person meetings on the second Monday, 6:30 PM. Contact chapter for location information.

Low Desert Chapter

Postal mailing address: **P.O. Box 4156, Palm Desert, CA 92261.**
General Information: Tony Vaninetti
Secretary: Marlies Dietrich
Adoptions: Bill Powers
Meeting: Meetings to be announced.

Orange County Chapter

Postal mailing address: **P.O. Box 11124, Santa Ana, CA 92711.**
General Information: OrangeCounty@tortoise.org
President: **John Kim**
Vice president/Membership: **Linda Grunnet**
Secretary: **Joyce Keyak**
Treasurer/membership: **Virginia Doepping**
Adoptions: Adoptions Questions
Meeting: In-person meetings on the first Friday of the every month at 7:30 PM at the First Christian Church of Orange, 1130 E. Walnut Ave., Orange, CA 92867.

Ridgecrest Chapter

Postal mailing address: **P.O. Box 1272, Ridgecrest, CA 93555.**
President: Robert Parker
Vice president: Sue Parker
Adoptions: Montynne Yates
Meeting: In-person meetings on the second Monday, 7:30 PM at the Maturango Museum, 100 E. Las Flores Ave., Ridgecrest, CA 93555.

Santa Barbara-Ventura Chapter

Postal mailing address: **P.O. Box 3086, Camarillo, CA 93011-3086.**
Chapter Information: SB.Ventura@tortoise.org
President: Christina Vanarelli
Vice president: Wendy Dasgupta
Treasurer/Membership: Sue Alvarez
Secretary: Chuck Alvarez
Meeting: Planned quarterly meetings in January, April, July, and October. Dates and locations to be announced.

Santa Clarita Chapter

Postal mailing address: **P.O. Box 4012, Castaic, CA 91310.**
General Information: Abigail DeSesa
President: **George Ordway**
Treasurer/membership/adoptions: Abigail DeSesa
Secretary: **Jennifer Fields**
Meeting: Meetings to be announced.

TOOSLO Chapter (website is down)

Postal mailing address: **P.O. Box 763, Grover Beach, CA 93483.**
Chapter Information: TOOSLO@tortoise.org
President: **Brandon Froelicher**
Vice president: **Emma White**
Treasurer: **Diane Olear**
Meeting: Activities are paused due to pandemic restrictions.

Turtle & Tortoise Care Society

Postal mailing address: **P.O. Box 15953, Long Beach, CA 90815.**
President: **Casey Quinn**
Vice president: John Kim
Secretary/Treasurer: **Yolanda Keh**
Adoptions: Adoptions Inquiries
Meeting: In-person meetings on the third Saturday, 7:30 PM at St. Gregory's Episcopal Church, 6201 E. Willow St., Long Beach, CA. 90815.

Valley Chapter

Postal mailing address: **P.O. Box 7364, Van Nuys, CA 91409-7364.**
President: Bob Hazard
Treasurer: Karen Berry
Adoptions: Valley Adoption Team
Meeting: Third Friday, 7:30 PM at Woodland Hills Christian Church, 5920 Shoup Ave., Woodland Hills 91367-3327. Virtual meetings via Zoom and in-person meetings until further notice.

Meeting Schedule: January/February 2024

Check your chapter website for program information.

Chino Valley
January 19; February 16

Foothill
January 26; February 23

High Desert
January 8; February 12

Inland Empire
January 5; February 2

Kern County
January 8; February 12

Low Desert
Meeting information to be announced.

Orange County
January 5; February 2

Ridgecrest
January 8; February 12

Santa Barbara-Ventura
Meeting information to be announced.

Santa Clarita
Meeting information to be announced.

TOOSLO (San Luis Obispo)
Contact the chapter for meeting information.

TTCS (Long Beach)
January 20; February 17

Valley
January 19; February 16

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

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CTTC Memberships and Renewals

Each chapter handles its own memberships/renewals.

There are three options for membership renewal:

1. Send a check to the mailing address of your chapter. In the panel below, you will find the current membership fees and the mailing addresses for each chapter.
2. Renew your membership in person at your chapter's meeting.
3. Some chapters have PayPal accounts that enable their members to renew memberships online.

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 (see postal addresses to the right).

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 near the top of 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}

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

TOOSLO Chapter: P.O. Box 763, Grover Beach, CA 93483

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

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

Tortuga Gazette
California Turtle & Tortoise Club
P.O. Box 7300
Van Nuys, California 91409-7300

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