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An adult Aldabra Giant Tortoise, *Aldabrachelys gigantea* subspecies *gigantea* photographed on a patch of tortoise turf in habitat in the Seychelles Islands. Photo © 2008 by Brieuc Fertard

featured species

Aldabra Giant Tortoise, *Aldabrachelys gigantea* (Schweigger, 1812)

The Indian Ocean Giant Tortoise

by M. A. Cohen

Sometimes referred to as the "other" giant tortoise, the Aldabra giant tortoise, *Aldabrachelys gigantea*, is one of two living giant tortoise species. The Galápagos tortoise, *Chelonoidis nigra*, inhabits the Galápagos Islands off the coast of Ecuador in South America. The Aldabra giant tortoise populates the Aldabra Atoll, the world's second-largest coral atoll, located in the Outer Islands of the Seychelles, east of the continent of Africa. According to Rich Baxter of the Indian Ocean Tortoise Alliance, Aldabra giant tortoises "form the largest giant tortoise population in the world, with four times as many individuals as there are in all of Galápagos" (Baxter, 2025). The estimated population size ranges from 100,000 to 150,000 giant tortoises on the atoll.

DNA studies indicate that the Aldabra giant tortoise and the Galápagos tortoise shared a common ancestor approximately

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A juvenile Aldabra giant tortoise "is very difficult to see in the field," according to the photographer. **Photo @ 2008 by Brieuc Fertard**

25-30 million years ago (mya). The Aldabra species originated at least 17.5 mya on the island of Madagascar off the coast of Mozambique, Africa.

Fossil records indicate that giant tortoises once lived on every continent and many islands, except Australia and Antarctica. Human exploitation eliminated giant tortoises from the continental land masses. Currently, giant tortoises are endemic only to islands in the western Indian Ocean and the eastern Pacific Ocean.

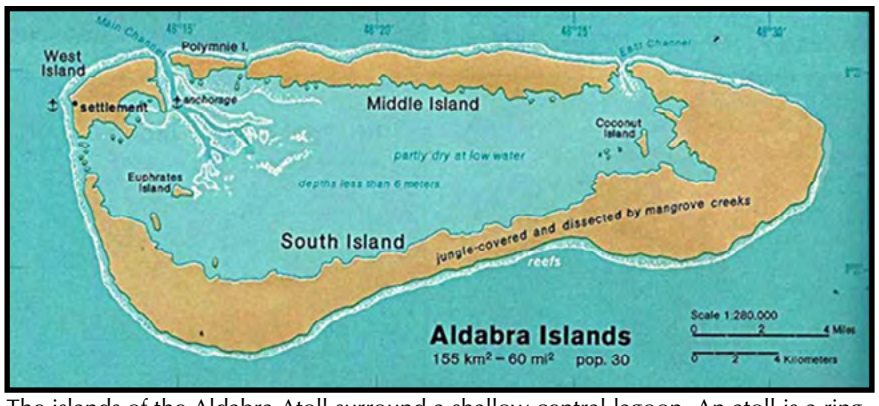
Another ancient genus of giant tortoise once existed on the islands of the Indian Ocean. Members of the genus *Cylindraspis*, these giant tortoises inhabited the islands of Mauritius, Reunion, and Rodrigues until human explorers and settlers arrived.

Exploited for food, the *Cylindraspis* tortoises went extinct by 1795. The Aldabra giant tortoise once lived on islands throughout the western Indian Ocean: Madagascar, the Comoros, Glorieuse, the Aldabra group (Aldabra, Assumption, Astove, and Cosmoledo), Farquhar, and the Seychelles.

Like all *Cylindraspis*, most *A. gigantea* also fell prey to humans during the Age of Exploration, approximately 1400 to 1600. Today the only surviving population of wild Aldabra giant tortoises lives on the Aldabra Atoll. Through rewilding programs, tortoises are being reintroduced on some of the islands where they historically lived (Gerlach & Canning, 1996; Aldabra Giant Tortoise, n.d.-c).

German naturalist August Friedrich Schweigger (1783–1821) formally described 12 turtle species in 1812, including the Aldabra giant tortoise. Known initially as *Testudo gigantea*, the species has undergone numerous name changes since 1812, including *Testudo elephantina*, *Geochelone gigantea,* and *Dipsochelys dussumieri*.

For decades, taxonomists have debated the appropriate name for the genus. Finally, in 2013, the International Commission of Zoological Nomenclature convened and officially named the Aldabra giant tortoise *Aldabrachelys gigantea*, the scientific name currently in use (Aldabra Tortoise, n.d.).



The islands of the Aldabra Atoll surround a shallow central lagoon. An atoll is a ring-shaped reef made of coral, and Aldabra is the second largest coral atoll in the world. The combined land area of the Aldabra Atoll is 60.0 sq. miles (155.4 sq. kilometers). This map was originally published in the CIA Indian Ocean Atlas. Public domain.

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The serrated jaws of the Aldabra giant tortoise. Photo © 2019 by Yulia Kolosova

Description

A. gigantea is "second only in size to the slightly larger species found in the Galápagos Islands." The female Aldabra giant tortoise reaches a carapace length of up to 35 inches (90 centimeters) and a weight of 150-159 pounds (331-361 kilograms). Males reach a carapace length of 47-48 in (120-122 cm) and can weigh up to 551 lbs (250 kg). The most massive male Aldabra giant tortoise ever documented weighed 794 lbs (360 kg) [Geochelone Gigantea, n.d.; Aldabra Giant Tortoise, 2016].

The hatchling Aldabra giant tortoise's carapace is typically black and glossy. As the tortoise matures, the carapace may remain black or turn brown or dark gray. Its carapace develops radial ridges on the dorsal and lateral carapacial scutes and becomes prominently domed. The male *A. gigantea* is typically larger than the female, and he has a longer, thicker tail.

Members of the subspecies *A. g. arnoldi* typically have a "saddle-backed" carapace: the front scutes of its carapace are moderately raised, allowing the tortoise to feed more easily on leaves of its preferred shrubs.

The head, neck, limbs, and tail of *A. gigantea* are typically gray to brown. Its head is wedge-shaped with a narrow, pointed snout. Its upper and lower jaws are sharply serrated, enabling the tortoise to tear through the fibrous vegetation it consumes. The tortoise does not chew its food; instead, it swallows mouthfuls whole, enabling seeds to pass intact through its digestive system.

The neck of the Aldabra giant tortoise is very long, enabling the tortoise to browse on shrubs up to 3.3 feet (1 meter) off the ground. Its long neck helps the tortoise to drink every drop of rainwater. These tortoises have also developed the ability to drink through their noses, maximizing their intake of the scarce, fresh water from very shallow puddles in their habitat.

The legs of the species are strong, thick, and typically covered with large, stout scales. *A. gigantea* is an excellent swimmer, and biologists believe that the tortoises spread from Madagascar to other Indian Ocean islands by swimming on the ocean tides and floating on mats of vegetation.

An Aldabra giant tortoise drinking "in the typical way of Aldabra tortoises, through the nostrils," from a shallow puddle. Photo © 2008 by Brieuc Fetard

Subspecies

Some chelonian biologists currently recognize four subspecies, including one extinct subspecies, of *A. gigantea*. Published scientific papers offer conflicting opinions on the genetics of the *Aldabrachelys* subspecies. Some researchers suggest that only one species of *Aldabrachelys* has ever existed in the Indian Ocean islands. In comparison, others recognize three distinct but closely related living subspecies and one extinct species.

Aldabrachelys gigantea gigantea

Native to the Aldabra Atoll, *A. g. gigantea* is the most abundant subspecies with at least 100,000 individuals in the atoll population. Members of this subspecies are part of the rewilding efforts in the Seychelles where tortoises are being relocated to islands on which they lived before being exploited for food and eggs.

A. g. arnoldi

This subspecies, termed the saddle-backed giant tortoise, inhabited the larger, granitic islands of the Seychelles. Scientists assumed it was extinct after 1840 due to human exploitation. In the 20th century, scientists examined some "odd-shaped" living individuals and compared them with museum specimens of the extinct subspecies, concluding that the subspecies is still alive.

This subspecies is the

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only Aldabra giant tortoise that frequently basks in the sun to thermoregulate. They lose heat from their long, exposed necks and need the sun's warmth to become active each day.

A. g. daudinii

Known from only two partial specimens, Daudin's giant tortoise is an extinct species. The last documented sighting of a living *A. g. daudinii* occurred on the Seychelles island of Mahé around 1830.

A. g. hololissa

Commonly called the Seychelles giant tortoise, this subspecies is morphologically (i.e., structurally) distinct from *A. g. gigantea* but has not yet proven to be genetically distinct. Historically, this subspecies inhabited the islands of Cerf, Cousine, Frégate, Mahé, Praslin, Round, and Silhouette.

Range and Habitat

Native populations of wild *A. gigantea* currently live only on the Aldabra Atoll in the Outer Islands of the Seychelles. The islands of the Aldabra Atoll are not populated by humans except for a small team of scientists and support staff conducting studies of the atoll's extensive biodiversity. The Aldabra Atoll was designated as a UNESCO World Heritage Site in 1982, affording it important legal protection. The atoll's managing organization, the Seychelles Island Foundation, strictly controls ecotourism.

The Aldabra Atoll is a low-lying island; its highest point is a dune that is 60 feet (18 meters) tall. As with many low-lying islands worldwide, rising sea levels pose a significant threat to all life on the atoll (Gepson, 2025).

A. gigantea cooling off in a rare freshwater pond on Curieuse Island, Seychelles. **Photo © 2015 by Bjørn Christian Tørrissen**

Biologists describe the habitat of the atoll as jagged limestone reefs with scrub vegetation, mangrove swamps and thickets, and coastal dunes surrounding a shallow lagoon. The atoll's landscape, built on ancient coral reefs, comprises limestone boulders and rocks, with a thin soil layer supporting tough, durable plants that can withstand harsh conditions.

Tortoise turf is an open grassland, created by the tortoises themselves, consisting of over two dozen species of grasses, sedges, flowering herbaceous perennials, etc. Aldabra giant tortoises continually graze on the tortoise turf, keeping it cropped close to the ground while stimulating the new growth of the plant species comprising the turf. Areas of tortoise turf occupy about three percent of the land area of the atoll, and most of it occurs along the coastline of the atoll's South Island, also known as Grande Terre

The Aldabra giant tortoises are effective ecosystem engineers, clearing pathways through overgrown thickets, improving soil fertility with their droppings, and dispersing the seeds of at least 20 different plant species as they travel around the atoll (Gepson, 2025).

Behavior

The Aldabra giant tortoise is active in the early morning and late evening, when air temperatures are comparatively low. Foraging and mating occur during these periods of activity. The tortoise avoids the midday heat by resting in the shade of shrubs and trees, sheltering in caves, and soaking in freshwater ponds when available.

Seed dispersal is one of the tortoises' most important activities. The tortoise does not chew its food, and, once eaten, the food spends three weeks or more in the tortoise's digestive system. During this passage, seeds become much more likely to germinate. When the dung is excreted, the seeds it contains become part of the food chain, feeding other wildlife such as birds and insects, and also help plant the next generation of edible plants.

A. gigantea is a long-distance walker, covering as much ground as a half mile in a day and five miles in a season. Because of the tortoise's travels, the seeds in its dung are dispersed well away from the mother plant, contributing to the atoll's expansive biodiversity (Gepson, 2025).

Diet

The Aldabra giant tortoise is primarily a grazing and browsing herbivore, consuming large

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quantities of plant parts, including woody stems, leaves, grasses, flowers, fruits, and roots.

Because it is an opportunistic feeder, *A. gigantea* will occasionally feed on carrion. A video exists filmed by researchers showing a female Aldabra giant tortoise hunting, killing, and eating a tern chick on Frégate Island in the Seychelles. Other instances of tortoises hunting birds have been reported, but are not well documented (Zora & Gerlach, 2021).

Reproduction

Breeding age in *A. gigantea* is determined by size rather than by age. Reproductive maturity begins when the tortoise reaches half of its fully grown size, generally around 25 years of age.

The breeding season of the Aldabra giant tortoise extends from February through May. In the wild, females lay 4 to 14 eggs in a dry, shallow nest that incubates for 3.5 to 7 months, depending on the nest's location. Typically, only about half of the eggs laid are fertile, and hatchlings emerge from October through December. Sometimes a second clutch is laid in the same season.

Threats

Rick Baxter of IOTA concisely summarizes the threats to the Aldabra giant tortoise the way: "... habitat degradation, poaching, and introduced predators pressure their survival, while rising sea levels and longer droughts threaten low-lying islands like Aldabra."

Conservation

The IUCN RedList lists *A. gigantea* as Vulnerable, but that evaluation from 1996 needs updating. Its CITES listing is Appendix II.

Six hundred years after the species was extirpated on Madagascar, rewilding efforts are underway. On Madagascar, as on other islands, giant tortoises are proving to be instrumental in restoring previously forested regions through their ecological engineering and seed dispersal. Similar projects are in progress on other Indian Ocean islands.

An Aldabra giant tortoise photographed in habitat. Photo © 2014 by swsankt

Among the essential reasons for reintroducing the species is the limiting of wildfires, as the tortoises eat the dry grasses that often fuel the fires. Ω

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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

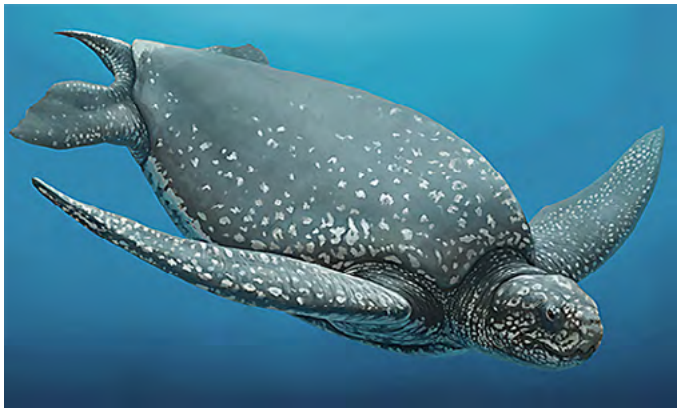
Family Fishing Trip Leads to "One-in-a-Million" Fossil Discovery

Poarch Band of Creek Indians press release

Mobile, Alabama—September 12, 2025—A family of four recently discovered the fossilized shell of a 32-million-year-old leatherback sea turtle while fishing along a river in south Alabama. The turtle shell, which is roughly 4 feet long and 3 feet across, represents a new genus and species of leatherback sea turtle and is one of the most complete fossils of its kind found anywhere in the world. The new species, *Ueloca colemanorum* (pronounced "Wee-low-juh kohl-man-or-um") was named by the Poarch Creek Indians Calvin McGhee Cultural Department in collaboration with a team of paleontologists from Alabama and California.

Adam Coleman and his wife Adrienne have spent years taking their two children, Talah and Corey, on regular fishing trips near their home in south Alabama. During these trips, the family occasionally takes breaks from fishing to search for fossils along the riverbank. Fossil hunting is a hobby Adam picked up from his father, and one that he now passes down to his children. "My dad got me into collecting fossils when I was a kid," said Adam. "Now we look for them every time we're on the river."

In the spring of 2021, the family took a fishing trip that would change their lives forever when they came across something extraordinary embedded in a massive limestone boulder. "I'd never seen anything like it," recalls Adrienne. "We knew it was probably a fossil but there was no telling what kind." Without knowing what they'd found or who to ask for more information, the Coleman's decided to keep it a secret. For months, the family regularly visited the bizarre find, often eating lunch in the shade of the cliff that stood just behind the huge, dome-shaped fossil.



An artist's rendering of *Ueloca colemanorum* exhibiting the deep-diving behavior characteristic of leatherback sea turtles. Credit: Elizabeth (Medena Drakorus) Hiley.

More than a year later, Adam happened to see a news article about a paleontologist with the Learning Campus at Gulf State Park named Dr. Andrew Gentry. Adam contacted Dr. Gentry and asked if he would be willing to visit the site to try and identify what the family had found. Although skeptical, Gentry agreed. "When I saw the fossil for the first time, it was hard to believe what I was seeing," said Gentry. "It was absolutely breathtaking." Gentry, whose research focuses on the fossil turtles of Alabama, realized that the Colemans had uncovered the fossilized shell of an ancient leatherback sea turtle.

According to Gentry, "leatherback sea turtles are unique for having a shell made up of a mosaic of tiny bones called ossicles instead of the broad, flattened plates typical of most turtle shells. When leatherback turtles die, the collagen that holds the ossicles together quickly decays and the mosaic falls apart. This makes intact fossil leatherback shells exceptionally rare."

Later that day, Gentry reached out to his colleague Jun Ebersole, a paleontologist and the Director of Collections at McWane Science Center in Birmingham, AL, to discuss the significance of the find. Gentry and Ebersole spent the next few months putting together a team of researchers from McWane Science Center, the Geological Survey of Alabama, Dauphin Island Sea Lab, Alabama Aquarium, and the National

Paleontologist Jun Ebersole drilling into the boulder containing the *Ueloca fossil*. Credit: Brian Jones

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Oceanic and Atmospheric Administration Corp to assist in retrieving the fossil. After the recovery effort, the enormous fossil was carefully transported to a research lab where Gentry and Ebersole assembled a group of scientists to clean and study the specimen.

Paleontologist Andrew Gentry working to fracture the boulder containing the *Ueloca* fossil by hammering metal spikes into the stone.
Credit: Corey Harper

The researchers determined that the fossil dated to the early Oligocene Epoch (~32 million years ago), represented a new genus and species of leatherback sea turtle, and was one of the most intact leatherback turtle shells known from the Western Hemisphere.

One of the members of the research team, Kimberly Gregson, is a Tribal Member of Poarch Creek Indians, and because the fossil was recovered from an area that is part of the Creek ancestral homeland, it was decided that this new leatherback turtle should be partly named in the Creek language of Muscogee (spelled in traditional Creek as "Mvskoke"). First Generation Decedent Samantha Martin with the Poarch Creek Indian's Calvin McGhee Cultural Department, and Dr. Marcus Briggs-Cloud, Muscogee Speaker, worked with the researchers to create the genus name *Ueloca* (pronounced Wee-low-juh) which comes from a combination of the Muscogee words "*Uewa*" (pronounced Wee-wah) meaning water and "*Locv*" (pronounced Low-juh) meaning turtle.

"This is the first fossil to carry a Muscogee name and it's exciting to see our language recognized in this way. Opportunities like this weave our voice into history and ensure it's never forgotten," said Samantha Martin, Creek Language Coordinator for the Poarch Creek Indians. "I'd like to thank Dr. Gentry for allowing the Tribe to be a part of this unique experience and extend a special thank you to Dr. Marcus Briggs-Cloud for his advice and expertise in the early stages of this project."

The species name, "*colemanorum*" honors the Coleman family for their initial discovery of this fossil and their subsequent help with its recovery.

"This is truly a one-in-a-million fossil," said Ebersole. "Specimens like this one are why Alabama is quickly becoming a globally recognized hot-spot for fossil diversity."

Ueloca not only adds to the incredible fossil record of the region but is also helping scientists piece together the origin story of the modern species of leatherback sea turtle. According to Gentry, "the remarkable preservation of *Ueloca* allowed for a more comprehensive anatomical study than is generally possible with fossil leatherbacks. By comparing *Ueloca* to leatherback fossils from around the world, we see evidence that there may have been at least two distinct groups of leatherback sea turtles that underwent a similar evolution over the last 40 million years." Despite their similarities, only one of the two groups survived to the present-day. The other appears to have vanished from the fossil record millions of years ago and scientists are unsure about the cause of their disappearance.

Members of the extraction team preparing to transport the *Ueloca* fossil by boat. Left to right: Josh Goff, Miller Nama, Jun Ebersole, Corey Harper, Charles Nichols, Andrew Gentry.
Credit: Erik Lizee

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"*Ueloca* has helped advance our understanding of the history of leatherback sea turtles but there are still unanswered questions," said Gentry.

The fossil has since been transported to McWane Science Center in Birmingham, Alabama where it is currently on public display. Gentry describes this project as a highlight of his career and a testament to how the study of fossils brings people together. "It never ceases to amaze me how quickly paleontology can turn a group of strangers from entirely different backgrounds, disciplines, and cultures into a cohesive team," said Gentry. "The thrill of discovery is universal."

The *Ueloca* extraction team following the successful recovery of the fossil. From left to right: (Top) Talah Coleman, Adrienne Coleman, Corey Coleman, Charles Nichols; (Bottom) Erik Lizee, Jun Ebersole, Andrew Gentry, Corey Harper, Josh Goff.
Credit: McWane Science Center

A close-up view of the mosaic of bony ossicles comprising the shell of the newly discovered fossil leatherback sea turtle.
Credit: Telegraph Creative

Paleontologist Andrew Gentry (left) and Poarch Creek Indians Tribal Member and student researcher Kimberly Gregson (right) are studying the fossil of *Ueloca colemanorum*, a newly discovered leatherback sea turtle from Alabama.
Credit: Telegraph Creative

The study titled *"A new leatherback marine turtle from the lower Oligocene of North America and a phylogenetic nomenclature for Dermochelyidae"* was published today [09/12/2025] in the open access journal *Palaeodiversity* and can be downloaded here: https://doi.org/10.18476/pale.v18.a6. Ω

The press release and photographs are reprinted with permission.

Special thanks to Karen Rodriguez of the DSB&P Agency for all of her help with the publication of this article.

To learn more about the Poarch Creek Indians, visit https://pci-nsn.gov/

Hot Fun in the Summertime

Story by Karen Berry and photos by Cristina Perovich, Valley Chapter

Summer is an active and very busy time for most CTTC chapters. Adoptions are in full force, and a lot of activities, from shows to local community events, are also taking place. The Valley Chapter has several community and chapter events that help extend educational outreach and foster camaraderie among members.

Moorpark Zoo Birthday Celebration

May 24, 2025

Following our show on May 17th, Vice President Bob Hazard represented the chapter at a special event held at Moorpark College, celebrating the 102nd birthday of Clarence, the resident Galápagos tortoise. Clarence is a favorite among tortoise enthusiasts and a highlight during Teaching Zoo tours. During the birthday celebration, Bob provided general information about turtles and tortoises, shared his expertise on their care and housing, promoted our adoption program, and conveyed birthday congratulations to Clarence from the entire Valley Chapter.

Moorpark Teaching Zoo Tour

June 20, 2025

Zoo Tour Attendees

Back row, from left: Maggie Elliot, Maria Kennedy, Steve Rossman, RuthAnn Rossman, Cathy Carpenter, Barbara Devries, Bob Hazard, Rick Meyer, John Witt, Cristina Perovich, Maureen Vignale, Jacob Vignale, Frankie Vignale, Jr.

Front row from left: Carlo Inzerella, Jodi Inzerella, Clarence, the 102-year-old Galápagos tortoise.

Whenever possible, the Valley Chapter organizes an annual field trip to encourage ongoing education and strengthen the members' camaraderie. This year, members visited the Moorpark Teaching Zoo at Moorpark College. The Zoo offers a curriculum for students interested in working in zoos or pursuing careers involving exotic animals. Chapter members explored exhibits featuring remarkable birds, mammals, and reptiles, and gathered for a group photo with Clarence.

Chatsworth Nature Preserve Open House

June 21, 2025

Cristina Perovich and Rudy the desert tortoise. He really enjoys this event and greeting small children.

The Los Angeles Department of Water & Power hosts an annual Open House at the Chatsworth Nature Preserve, formerly known as Chatsworth Reservoir.

Karen Berry staffing the Valley chapter's booth at the Chatsworth event and answering visitors' questions.

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Although the area is typically closed to the public, this one-day big event—usually held in April to coincide with Earth Day—offers a rare opportunity for community engagement.

However, due to the extensive damage caused by the Palisades fire, and DWP's extensive mitigation work, the Open House was rescheduled to June to align with the Summer Solstice. Members Cristina Perovich and Karen Berry, accompanied by Rudy the desert tortoise and later joined by Barbara Devries and Cathy Carpenter, staffed the event. This occasion allows members to interact with the public—Rudy is especially adept at greeting visitors—and connect with other organizations dedicated to education, conservation, and preservation of the environment.

This year's excitement was heightened by battalions of red ants emerging when the sun came out, assaulting several areas in the venue and making their debut visit to Valley's booth. While visitors weren't deterred, a few well-placed cones alerted them to avoid the ants.

This annual event is a lot of fun and has become a "see you same time next year" relationship with many of the other exhibitors, some of which have participated in our annual show.

Show 'n' Tell Meeting
July 18, 2025

Our July meeting is a big social event for the members; they are invited to bring their turtles and tortoises to the meeting and share them with the other members. The individual presentations can be educational in nature, or even funny or touching stories about them. This year's meeting was well attended and enjoyable. Several members were attending for their first time.

Cori Maass and Jeremy Padot – newer foster parents and their foster tortoise "Baby Mortoise" (first time at the show 'n' tell meeting).

Jodi Inzerella, 92 years young and still actively participating in chapter meetings and events.

sThere was plenty of good food. The main course was BBQ meats from the Stonefire Grill, and the appetizers, salads, sides, and desserts were pot-lucked by the members.

This year, we modified our usual 4th of July theme a little bit to "Luau to Celebrate the 4th of July". Both humans and tortoises were encouraged to wear Hawaiian-themed attire, and there were prizes for the best Hawaiian outfit as well as the most unique (rather than "ugly) Hawaiian shirt. But nobody was daring enough to arrive in a grass skirt and a coconut-shell bra.

Paula Williamson and her Russian tortoise

Bob Hazard and Hardie.

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MK (left) and Carol Witt (right) ▲

MK (left) and John Witt (right) ▼

It's a great night for veteran members to visit with each other and welcome new members to the chapter, in addition to enjoying a great meal and a lot of fun. Ω

◀ MK (left) and Carlo Inzerella (right)

There was a nice raffle for the members. President Maria Kennedy announced winners of the "Tortoise Bucks" competition and the winners of the Hawaiian outfit/shirt contest, and there were door prizes for all the competition participants.

Winners of the best Hawaiian outfit contest went to Monica Haynes and her Mom, Margaret Haynes-Switzer (right side of the table). ▶

Leatherback Sea Turtle Habitat in Puerto Rico One Step Closer to Protection

Center for Biological Diversity press release

San Juan, Puerto Rico—25 August 2025—As a result of a petition filed by conservation groups, the U.S. Fish and Wildlife Service has announced that nesting habitat for leatherback sea turtles (*Dermochelys coriacea*) in Puerto Rico may warrant protection as designated critical habitat under the Endangered Species Act. The revised habitat would protect three important leatherback nesting beaches in Puerto Rico and may also include several other beaches on the island.

Friday's decision, known as a 90-day finding, is the first procedural step toward protecting leatherback nesting beaches on Puerto Rico's California Beach, Maunabo; Tres Hermanos Beach, Añasco; and Grande Beach, Arecibo. The Fish and Wildlife Service must now conduct a thorough review of the best available science before determining whether to increase habitat protections under the Endangered Species Act.

Amigos de las Tortugas Marinas, Vida Marina Center for Conservation and Ecological Restoration, Yo Amo el Tinglar and the Center for Biological Diversity submitted the petition in February 2024.

"After 25 years of hard work and community collaboration to protect leatherback turtles and the California beach in Maunabo, we are proud that the U.S. Fish and Wildlife Service has recognized the importance of this beach for the species. We are deeply grateful to all the volunteers who have worked with us over the years — this achievement belongs to all of you. Special thanks to the Center for Biological Diversity, Mr. Carlos Diez from Puerto Rico's Department of Natural and Environmental Resources, and Dr. Jessica Castro for their invaluable support," said Luis Crespo, president of Amigos de las Tortugas Marinas and Puerto Rico WIDECAST country coordinator.

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"We are excited to see the U.S. Fish and Wildlife Service recognize the significance of our local nesting beaches for leatherback sea turtles. This consideration for nesting critical habitat is crucial for the protection of these endangered turtles in Añasco and the other areas," Mariela Muñoz, director of Vida Marina Center for Conservation and Ecological Restoration at the University of Puerto Rico. "We are dedicated to enhancing our conservation efforts and collaborating with the community to ensure these vital habitats are preserved for future generations."

"We are very grateful for this advancement in the process and truly believe it will play an important role in ensuring the safety and protection of the beaches involved," said Myrna Concepción, project leader from Comité Arecibeño por la Conservacion de las Tortugas Marinas, known as "Yo Amo el Tinglar." "For over 10 years Yo Amo el Tinglar has been collecting data across multiple nesting beaches, with Playa Grande consistently documented as the most used nesting site by leatherbacks, yet it remains the most vulnerable to habitat loss due to the sale of adjacent lands and habitat destruction. For this reason, we deeply value the U.S. Fish and Wildlife Service's decision to launch a biological status review and consider the revision of critical habitat. We also recognize the importance of providing supplementary information during this process and will gladly contribute any relevant data to support the agency's efforts."

"We are glad the U.S. federal government recognizes the importance of these nesting beaches for leatherback sea turtles and is willing to provide additional protection by considering them as part of the 'nesting critical habitat,'" said Carlos E. Diez, Sea Turtle Project coordinator at the Puerto Rico Department of Natural and Environmental Resources and member of the IUCN Sea Turtle Specialist Group. "This action encourages us to continue our management and conservation efforts to help recover this endangered species."

A leatherback marine turtle swims toward the ocean's surface for a breath of air. **Photo © 2022 by azure27014**

"Designating the most important nesting beaches for leatherbacks in Puerto Rico as critical habitats would be a key step toward the recovery of this endangered species," said Jessica Castro, Ph.D., former Caribbean Conservation Coordinator at the National Wildlife Refuge Association, a contributor to the petition.

"I'm encouraged that the Service will consider protecting more nesting beaches for leatherbacks in the Caribbean," said Elise Bennett, Florida and Caribbean director and attorney at the Center for Biological Diversity. "To secure a future for these massive turtles, their most vital habitat in Puerto Rico must be protected."

Leatherback sea turtles are the largest turtles in the world and existed at the same time as dinosaurs. They are highly migratory, travelling thousands of miles a year, and they can dive to great depths — nearly 4,000 feet.

Leatherbacks have been federally protected as endangered since 1970. They are threatened by fishing gear bycatch, direct harvest, habitat destruction, ocean pollution, vessel strikes and climate change. A recent federal review of leatherback sea turtle science concluded that all seven distinct populations of leatherback sea turtles worldwide remain endangered.

The leatherback sea turtle currently has terrestrial critical habitat on just one stretch of beach at Sandy Point, St. Croix, in the U.S. Virgin Islands, and marine critical habitat in waters off Sandy Point in the North Atlantic Ocean, and off the coasts of California, Oregon and Washington in the Pacific Ocean.

Puerto Rico, Florida and the U.S. Virgin Islands host the most important nesting beaches for leatherback sea turtles under U.S. jurisdiction.

Species with federally protected critical habitat are more than twice as likely to recover as species without it. The Endangered Species Act requires federal agencies to ensure any activities they authorize do not destroy or damage areas essential for the survival of endangered animals and plants. Ω

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

Alyogyne huegelii
Blue Hibiscus

The blossoms, buds, and leaves of Blue Hibiscus photographed in Australia. Photo © 2024 by Les Servidio

The Malvaceae, commonly known as the Mallow family, is a large group of flowering plants containing genera of economic and horticultural importance. There are nearly 250 recognized genera and over 4,200 species of mallows worldwide.

Alyogyne huegelii, pronounced Al-ly-oh-GY-nee Hew-GEL-ee-eye, is an ornamental mallow that is native to the states of South and Western Australia, where it grows in soils that are predominantly composed of sand or sand and gravel (Antosh, 2019). The species is relatively plentiful in the wild and, from a conservation standpoint, is not considered to be at risk.

Other Mallow family members previously profiled in this column include tropical hibiscus (*Hibiscus rosa-sinensis*), apricot mallow (*Sphaeralcea ambigua*), Chinese lantern (*Abutilon hybridum*), and tree mallow (*Lavatera bicolor*).

The genus name *Alyogyne* is a combination of two Greek word roots, *alyto-*, meaning wing-like, and *-gyne*, meaning ovary. The genus name refers to the extension of the flower's ovary that botanists call the 'style.' The species name *huegelii* pays homage to the 19th-century Austrian army officer and botanist, Baron Charles (or Carl) von Hügel. In 1833-34, he traveled in Australia and collected the seeds of local plants for his garden in Austria.

Taxonomists initially included blue hibiscus in the *Hibiscus* genus, and its botanical name was *Hibiscus huegelii*. In 1863, they assigned it to the genus *Alyogyne*. Blue hibiscus is one of five species in the *Alyogyne* genus, all of which are native to Australia (Alyogyne Huegelii, n.d.).

A vivid purple *A. huegelii* flower with a white throat photographed in Australia. Photo © 2021 by Chris Seager

Description

Blue hibiscus is a fast-growing, medium-sized, evergreen shrub that reaches a mature height of 4 to 8 feet (1.2 to 2.4 meters) with equal spread at maturity. Its growth habit is open and upright or spreading with many branches.

The leaves of the species are deeply lobed with three to five lobes per leaf. Leaf surfaces are medium-green with a rough texture.

Dense, woolly hairs cover the flower buds, which botanists describe as tomentose, giving the buds a golden-colored downy surface. The showy, solitary flowers of *A. huegelii* are purple, lilac, mauve, pink, yellow, cream, and white, and petals may have a white "throat." There are no true blue flowers despite the species' common name. Blossoms consist of five glossy petals and may measure up 4 inches (10

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A pure white *A. huegelii* blossom of the cultivated variety 'White Swan' photographed in California. Photo © 2018 by Zoya Akulova

centimeters) in diameter. Blossoms generally last up to three days each, and blue hibiscus often blooms throughout the year in mild climates.

Cultivation

A. huegelii is a fast-growing, drought-tolerant shrub once it is established. It requires regular watering during its first growing season. After establishment, blue hibiscus will thrive with only light supplemental watering, which will improve its appearance and flower production.

Due to its rapid growth, pruning is a crucial aspect of aspect of cultivation. Consistent pruning maintains compact, dense growth and promotes abundant flowering. New growth emerges swiftly from old wood. Hard pruning after the spring bloom is one successful pruning strategy, and light pruning throughout the year, removing about one-third of each branch, is another beneficial practice.

Blue hibiscus does ***not*** tolerate poor drainage. A well-drained planting site is essential for growing the species. A location in the garden with full sun is ideal; however, the plant will tolerate partial shade with excellent drainage.

Phosphorus Sensitivity

Commercially sold fertilizers typically display their nutrient content analysis on their the packaging. The "big three" macronutrients present in chemical fertilizers are N (nitrogen), P (phosphorus), and K (potassium). Typically, the label also lists micronutrients and trace minerals.

A. huegelii is adapted to nutrient-deficient soils. It is highly susceptible to phosphorus toxicity, which creates an unhealthy environment for growth. Therefore, gardening authorities recommend using an organic mulch such as compost rather than chemical fertilizers. Replenish the mulch periodically as it breaks down, which adds organic matter to the soil and improves its texture. Mulch is beneficial as it keeps the soil cooler and more evenly moist, reducing the plant's need for water (Keena et al., n.d.).

Propagation

Blue hibiscus can be propagated from seed. When using this propagation method, the best results will occur if seeds are from the species rather than a cultivar. Seeds from a cultivar may not "come true," meaning the child plant may not resemble the parent plant. Scarify the seed using sandpaper or a file to break through the seed's protective coating. Scarification allows water to penetrate the seed, hastening the germination process.

Propagation by cuttings is also an option. Half-hardened or softwood tip cuttings yield the best results. A length of about 4 inches (10 centimeters) is best for propagation by cuttings. Ω

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A. huegelli in full bloom photographed in Australia. Photo © 2021 by Elaine Fieth

Chapter Meeting Schedule: November/December 2025

Check your chapter website for program information.

Chino Valley
November 21; December 19

Foothill
November 28; December 26

High Desert
November 10; December 8

Inland Empire
November 7; December 5

Kern County
November 10; December 8

Low Desert
Meeting information to be announced.

Orange County
November 7; December 5

Ridgecrest
November 10; December 8

Santa Barbara-Ventura
Meeting information to be announced.

Santa Clarita
Meeting information to be announced.

TOOSLO (San Luis Obispo)
November 25

TTCS (Long Beach)
November 15; December 20

Valley
November 21; December 19

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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.
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