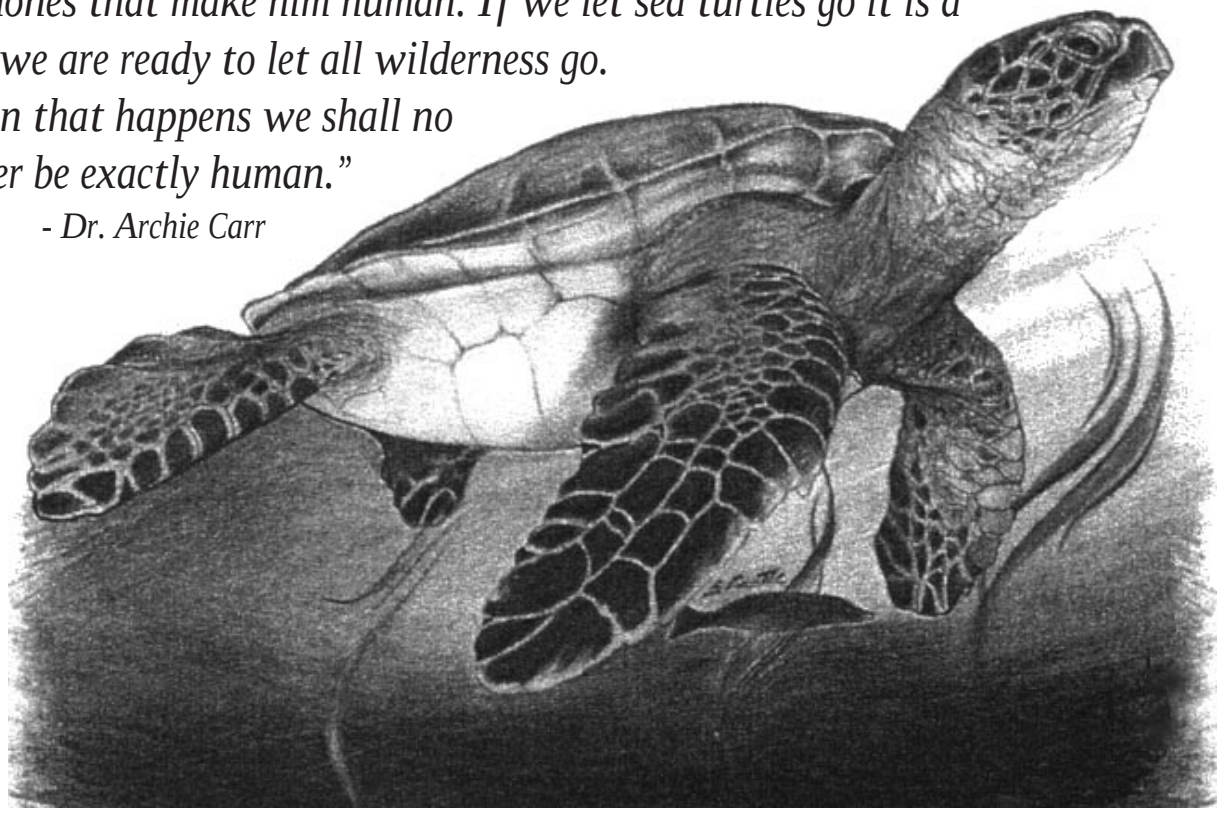
Sea Turtle Conservation Guide

"If the world goes on the way it is going, it will be a world without sea turtles. Some people accept this calmly, but I mistrust the prospect. Sea turtles are part of the old wilderness of the Earth, the environment in which man got the nerves and hormones that make him human. If we let sea turtles go it is a sign we are ready to let all wilderness go. When that happens we shall no longer be exactly human."

- Dr. Archie Carr



It is the mission of the Caribbean Conservation Corporation to ensure the survival of sea turtles within the wider Caribbean basin through research, education, advocacy and the protection of the natural habitats upon which they depend.

CARIBBEAN CONSERVATION CORPORATION

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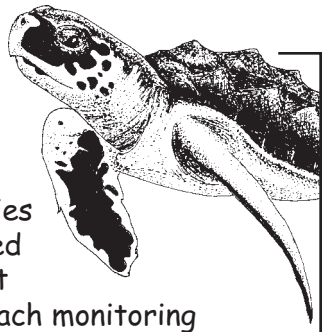
SEA TURTLE SURVIVAL LEAGUE

History and Summary of Activities



ORGANIZATIONAL BACKGROUND

During the early 1950s, University of Florida graduate research professor Dr. Archie Carr began studying sea turtles, about which no one seemed to know even the most basic life history. Through his groundbreaking research in the Caribbean, Dr. Carr discovered much of what is now known about sea turtles. However, he also observed that sea turtles, world wide, were slipping toward extinction.

Here was a group of species that had thrived since the time of dinosaurs, but because of human actions was being wiped off the planet. Dr. Carr was very concerned about the implications for marine organisms, as well as our own species. He came to view sea turtles as a health indicator for the marine environment.

Research into the life cycle of sea turtles revealed that from the time they emerge as hatchlings until decades later when they return to land to reproduce, sea turtles travel the globe. They are exposed to and rely upon the health of countless marine and coastal habitats for their survival. The collapse of sea turtle populations was telling Dr. Carr that the world's oceans and coastlines were in serious trouble.

In 1957, Dr. Carr published an award winning book, *The Windward Road,* which first alerted the world to the plight of sea turtles. International publishers representative Joshua B. Powers was so moved by the book that he convinced a group of friends to form the "Brotherhood of the Green Turtle" to support sea turtle conservation. A short time later, with the guidance of John H. Phipps, Archie's longtime friend and benefactor, the Brotherhood was incorporated as a nonprofit 501 (c)(3) organization under the new name — Caribbean Conservation Corporation (CCC).

Based in Gainesville, Fla., **CCC became the first organization in the world dedicated solely to the study and protection of marine turtles and their habitats.**

CCC focused its early efforts on the world's largest remaining colony of green turtles (*Chelonia mydas*), which nests primarily on a 22-mile stretch of black-sand beach in Tortuguero, Costa Rica. A combination of overharvesting, habitat degradation and egg poaching on the beach was driving the species to extinction. CCC responded by establishing a permanent research, education and beach monitoring station at Tortuguero. CCC has continuously monitored and protected the nesting colony, helped persuade the Costa Rican government to establish its first national park at Tortuguero, and has advocated for stronger laws protecting sea turtles in Latin America and Caribbean nations. CCC's work in Tortuguero continues to this day, making it one of the longest running research and conservation projects in history.

Over the decades, CCC has also supported research projects throughout the wider Caribbean and has responded to numerous threats to the species. In 1993, CCC initiated the successful Sea Turtle Survival League program to improve the survival outlook for sea turtles in the United States through advocacy and the raising of public awareness.

WHY SEA TURTLES NEED OUR HELP

Sea turtles were once so numerous in the Caribbean that early voyagers to the New World described them as traveling in huge "fleets." Green turtles were particularly abundant, numbering in the tens of millions.

As a result of over-hunting, habitat destruction and other human activities, the green turtle population is now a mere fraction of its once robust size (many experts estimate the current population to be just 6 percent of what it had been). In addition to green turtles, all other sea turtle species are threatened with extinction as a result of human activities.

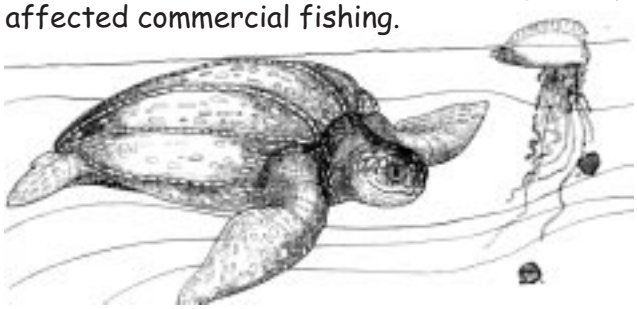
THE IMPORTANCE OF SEA TURTLES

Scientists are just beginning to understand the important ecological roles sea turtles play in various marine and coastal ecosystems. Where large numbers of plant-eating green turtles graze on seagrass and algae, commercially important species such as shrimp, lobster, fish, and sharks thrive because the sea bottom habitat is more healthy and productive.

By depositing their eggs on the shore, sea turtles transport vital nutrients from the ocean to nutrient-poor coastal and inshore habitats. In

fact, sea turtles are the only marine species that regularly transfer nutrients to the upland coastal habitat.

Hawksbill turtles, which feed on sponges and corals, are believed to play a major role in maintaining the health and diversity of coral reef systems. In the Pacific, the collapse of leatherback turtle populations is partly responsible for an explosion in jellyfish populations (their main diet), which in turn has negatively affected commercial fishing.



In short, sea turtles are increasingly being recognized as an important strand in the web of ocean life—sea turtles help to sustain the biological diversity of the oceans, and biological diversity in the oceans helps sustain the Earth.

CCC's MAJOR PROGRAM AREAS

Costa Rica: CCC operates a Biological Field Station at Tortuguero, Costa Rica—nesting site of the largest remaining population of green turtles in the Western Hemisphere. CCC's annual turtle nesting studies and protection efforts at Tortuguero constitute the longest continuous program of its kind in the world. Through this conservation initiative, CCC has reversed the decline of green sea turtles in the Caribbean.

Bermuda: Since the early 1960's, CCC has carried out annual in-water studies of juvenile green turtles in Bermuda. These studies, founded and supported by Dr. H. Clay Frick and his family, are now the longest continuous in-water studies of sea turtles in the world. This research and education program is safeguarding a diverse population of sub-adult turtles that matures in Bermuda and returns to seed nesting beaches throughout the Western Hemisphere.

United States: Florida's beaches support 90% of all the sea turtle nesting in North America. CCC is the leading organization working with local, state and federal agencies to protect important nesting beaches in the U.S., such as the Archie Carr National Wildlife Refuge, named in honor of CCC's founding director.

MAJOR ACCOMPLISHMENTS

* Analysis of CCC's long-term sea turtle nesting studies in Tortuguero shows the population has stopped its decline and is actually beginning to grow in numbers, thanks to the efforts of CCC.

* CCC's education, research, and conservation initiatives, one of which was the establishment of Tortuguero National Park in Costa Rica, have been credited by many with saving the Caribbean green turtle from immediate extinction.

* Research conducted and supported by CCC has shown that Florida's beaches are significant nesting sites for green turtles, loggerheads and leatherbacks.

* In 1990, CCC led a successful initiative to get Congress to designate one of Florida's most important nesting beaches as the Archie Carr National Wildlife Refuge. This refuge remains the only protected sea turtle refuge in the U.S.

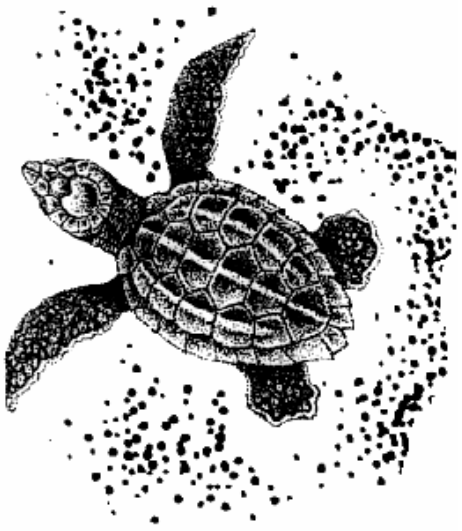
* A CCC delegation sent to the 2000 *Convent*ion on International Trade in Endangered Species in Nairobi, Kenya, was successful in blocking the reopening of international trade in the shells of critically endangered hawksbill sea turtles.

* CCC was instrumental in the signing of an international sea turtle agreement in Central America that is serving as a model for the coordinated protection of animals that regularly cross international boundaries.

* CCC's Internet-based Sea Turtle Migration-Tracking Education Program has reached over one million children and adults, and it has been featured on CNN, Discovery Network, Animal Planet and the National Geographic Channel.

* In Florida, CCC spearheaded the establishment of a sea turtle specialty automobile license plate, which provides the annual budget for the State's Marine Turtle Protection Program. Plate revenues also support a grants program that funds sea turtles education and research projects throughout Florida.

Overview of Sea Turtles



Sea turtles are large, air-breathing reptiles that inhabit tropical and subtropical seas throughout the world. Their streamlined bodies and large flippers make them remarkably adapted to life at sea.

However, sea turtles maintain close ties to land. Females must come ashore to lay their eggs in the sand; therefore, all sea turtles begin their lives as tiny hatchlings on land.

Research on marine turtles has uncovered many facts about these ancient creatures. Most of this research has been focused on nesting females and hatchlings emerging from the nest, largely because they are the easiest to find and study. Thousands of sea turtles around the world have been tagged to help collect information about their growth rates, reproductive cycles and migration routes.

After decades of studying sea turtles, much has been learned. However, many mysteries still remain. New technologies, such as satellite telemetry, are allowing scientists to monitor turtles throughout their range. The information gathered through satellite-tracking should answer many questions and help conservation groups like the Sea Turtle Survival League develop better strategies for protecting sea turtles.

General Description

Each species of sea turtle looks and behaves distinctly, but they do have several common characteristics. Their shells consist of an upper part (carapace) and a lower section (plastron). Hard scales (or scutes) cover all but the leatherback turtle, and the number and arrangement of these scutes can be used to determine the species. They do not have teeth, but their jaws have modified "beaks" suited to their particular diet. They do not have visible ears but have eardrums covered by skin. They hear best at low frequencies, and their sense of smell is excellent. Their vision underwater is good, but they are nearsighted out of water.

Reproduction

Only females come ashore to nest; males rarely return to land after crawling into the sea as hatchlings. Most females return to nest on the beach where they were born (natal beach). Nesting seasons occur at different times around the world. In the U.S., nesting occurs from April through October. Most females nest at least twice during each mating season; some may nest up to ten times in a season. A female will not nest in consecutive years, typically skipping one or two years before returning.

Growth & Development

Researchers do not yet know how long baby turtles spend in the open sea, or exactly where they go. It is theorized that they spend their earliest, most vulnerable years floating around the sea in giant beds of sargasso weeds, where they do little more than eat and grow. Once turtles reach dinner-plate size, they appear at feeding grounds in nearshore waters.

They grow slowly and take between 15 and 50 years to reach reproductive maturity, depending on the species. There is no way to determine the age of a sea turtle from its physical appearance. It is theorized that some species can live more than 100 years.

Turtles and Humans

Sea turtles have long fascinated people and have figured prominently in the mythology and folklore of many cultures.

In the Miskito Cays off the eastern coast of Nicaragua, the story of a kind "Turtle Mother," still lingers. Unfortunately, the spiritual significance of sea turtles has not saved them from being exploited for both food and for profit. Millions of sea turtles once roamed the earth's oceans, but now only a fraction remain.

Status

The earliest known sea turtle fossils are about 110 million years old. In groups too numerous to count, sea turtles once navigated throughout the world's oceans. But in just the past 100 years, demand for turtle meat, eggs, skin and colorful shells has reduced their numbers.

Destruction of feeding and nesting habitats and pollution of the world's oceans are all taking a serious toll on remaining sea turtle populations. Many breeding populations have already become extinct, and entire species are being wiped out. There could be a time in the near future when sea turtles are just an oddity found only in aquariums and natural history museums — unless action is taken today.

How You Can Help

There are many things each of us can do to help sea turtles survive. First, we must remember that we share the oceans and the beaches with many other species. Second, become informed about the things that are killing sea turtles or destroying their habitat. Elected officials and other leaders are making decision on issues that affect sea turtles almost every day. As an informed citizen, you have the power to influence the outcome of these issues by making your voice heard. Third, take personal responsibility for your actions. By simply reducing the amount of plastic garbage, using biodegradable chemicals and not leaving trash on the beach when you leave, you can help save sea turtles and protect coastal habitats.

You can read more about actions you can take to help sea turtles on page 9!

What is Extinction and Why Should You Care If Sea Turtles Go Extinct?

A plant or animal becomes extinct when the last living individual of its species dies, causing it to vanish from the earth forever. If there is ever a time when the last green turtle on earth dies, then never again will this magnificent creature grace our world.

Species have been going extinct for millions of years; it is a natural part of the evolutionary process. For example, most of the species that existed during the time of dinosaurs have perished. Many probably went extinct because of sudden geological or climatic changes. Today, however, species are going extinct because of abrupt changes brought about by humans. Habitat destruction, pollution and overharvesting are causing species to decline at accelerated rates. This loss of species is eroding the diversity of life on earth, and a loss of diversity can make all life vulnerable.

Much can be learned about the condition of the planet's environment by looking at sea turtles. They have existed for over 100 million years, and they travel throughout the world's oceans. Suddenly, however, they are struggling to survive, largely because of things people are doing to the planet's oceans and beaches. But what does this mean for the human species?

It is possible that a world in which sea turtles cannot survive may soon become a world in which humans struggle to survive. If, however, we learn from our mistakes and begin changing our behavior, there is still time to save sea turtles from extinction. In the process, we will be saving one of the earth's most mysterious and time-honored creatures. We might just be saving ourselves too.

The Five Species of Sea Turtles Found in Atlantic Waters

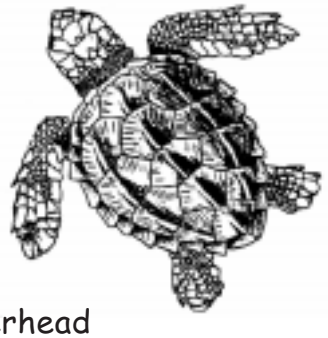
Most scientists recognize seven living species of sea turtles. The five species regularly found in Atlantic waters are described below:

Loggerhead (*Caretta caretta*)

Of all the sea turtles that nest in the United States, the loggerhead is the one seen most often. While all other species found near the U.S. coastline are listed as endangered, the loggerhead is classified as threatened. This means loggerheads are more numerous than the other species, but they are still in danger of extinction.

Adult loggerheads weigh up to 350 pounds and have a reddish-brown carapace and a dull brown to yellow plastron. Fully grown, a loggerhead's carapace is typically 32 to 41 inches long (82-105cm).

Loggerheads lay eggs at intervals of 2, 3, or more years. Nesting season runs from May through September in the U.S. They lay 4 to 7 nests per season, approximately 14 days apart. The average number of eggs in each clutch ranges from 100 to 126, and the eggs incubate for about 60 days. Loggerhead nesting is concentrated in two main areas of the world -- Masirah Island, Oman, in the middle east and on the coast of the southeastern United States. Masirah Island's annual nesting population is less than 30,000 females, while over 25,000 loggerheads nest in the southeast U.S. each year. The majority of nesting in the southeast U.S. takes place on Florida's Atlantic coast between the inlet at Cape Canaveral and Sebastian Inlet, especially within the Archie Carr National Wildlife Refuge.



Green turtle

(*Chelonia mydas*)

Green turtles are an endangered species around the world, but they still nest in significant numbers on the east coast of Florida. They are easily distinguished from other sea turtles because they have a single pair of scales in front of their eyes rather than two pairs as other sea turtles have. The green turtle is the largest of the Cheloniidae family. Female green turtles that nest in Florida average more than three feet in carapace length, and average about 300 pounds in weight. The largest green turtle ever found was 5 feet in length and 871 pounds.

Green turtles nest at intervals of 2, 3, or more years. They lay an average of 3 to 5 egg clutches, with about 12 days between each nesting. There are an average of 115 eggs per clutch and they incubate for about 60 days. Nesting season runs from June through October in the U.S. The largest nesting site in the western hemisphere is at Tortuguero, Costa Rica.

Leatherback

(*Dermochelys coriacea*)

Leatherbacks are also endangered, but a few nest on the east coast of Florida each year. The leatherback is the champion of sea turtles. This species grows the largest, dives the deepest, and travels the farthest of all sea turtles. Mature leatherbacks typically reach about 4 to 8 feet in length

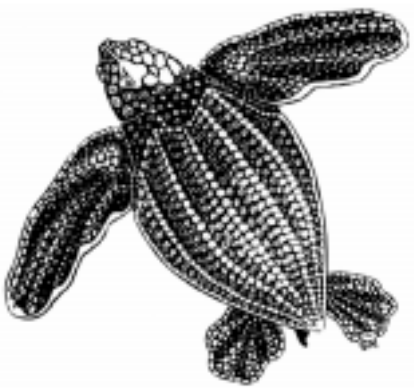
and weigh from 650 to 1,300 pounds. The largest leatherback ever recorded was almost 10 feet (3 m) from the tip of its beak to the tip of its tail and weighed in at 2,019 pounds (916 kg).

The leatherback is the only sea turtle that lacks a hard shell. It is named for its large, elongated shell which is composed of a layer of thin, tough, rubbery skin, strengthened by thousands of tiny bone plates. Seven narrow ridges run down the length of the carapace, which is typically black with many white spots. The lower shell is whitish to black and 5 ridges.

The body of a leatherback is barrel shaped, tapering at the rear to a blunt point. With this streamlined body shape and the powerful front flippers, a leatherback can swim thousands of miles over open ocean and against fast currents.

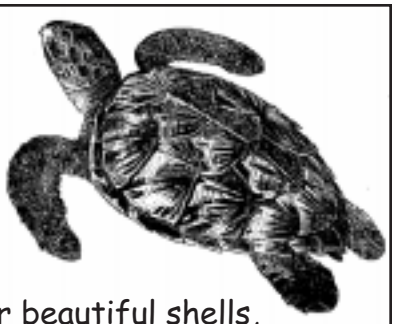
Leatherbacks feed almost exclusively on jellyfish. It is remarkable that this large, active animal can survive on a diet of jellyfish, which are composed mostly of water and appear to be a poor source of nutrients. Young leatherbacks in captivity can eat twice their weight in jellyfish each day.

Leatherbacks approach coastal waters only during breeding season. Nesting occurs throughout the Caribbean, on the northern coast of South America, the Pacific coast of Central America, and on the east coast of Florida. Nesting season runs from March through July. Leatherbacks nest every 2 to 3 years, laying 6 to 9 egg clutches in a nesting season. Each clutch contains approximately 80 fertilized eggs the size of billiard balls and 30 smaller, unfertilized eggs. There is an average of 10 days between nestings. The eggs incubate for approximately 65 days.



Hawksbill

(*Eretmochelys imbricata*)



Hawksbills are endangered in large part because people kill them to get their beautiful shells, which are used to make jewelry and other products. Although they are found in U.S. waters, they rarely nest in North America.

The hawksbill is one of the smaller sea turtles, measuring 30 to 36 inches in carapace length (76-91 cm) and weighing 100 to 150 pounds (40-60 kg).

Hawksbill turtles nest at intervals of 2, 3, or more years. An average of 2 to 4 egg clutches are laid approximately 15 days apart during nesting season. An average of 160 eggs per clutch are laid and they incubate for approximately 60 days. Although they nest on beaches throughout the Caribbean, they are no longer found anywhere in large numbers.

Kemp's ridley

(*Lepidochelys kempii*)

Kemp's ridleys are the most endangered of all sea turtles; they are also the smallest. Adults measure 24 to 28 inches (62-70 cm) in carapace length and weigh between 77 and 100 pounds (35-45 kg). The carapace of is olive green and the plastron is yellowish.

Unlike other sea turtles, Kemp's ridleys nest annually. They lay about 2 clutches during each season, about 25 days apart. Each nest contains around 105 eggs, which incubate 55 days. The only major breeding site of the Kemp's ridley is on a small strip of beach at Rancho Nuevo, Mexico. Kemp's ridleys nest in mass synchronized nestings called *arribadas* (Spanish for "arrival").

The arribada of Kemp's ridleys occurs at regular intervals between April and June. In 1942, a Mexican architect filmed an estimated 42,000 ridleys nesting at Rancho Nuevo in one day. During 1995, only 1,429 ridley nests were laid at Rancho Nuevo.

Sea Turtles & Satellite Telemetry

Researchers are now utilizing satellites to track sea turtles in the open ocean. First, a Sony Walkman-sized transmitter is attached to the back of an adult or juvenile sea turtle. The transmitter is attached directly to the turtle's carapace, behind the head, where the unit's small flexible antenna can break the surface to transmit a signal when the turtle comes up to breathe.

The transmitters controlled by a microprocessor which is programmed before they were attached. The program tells the microprocessor how to store information and when to transmit the information to the satellites. The polar orbiting satellites currently used for tracking animals are operated by the U.S. National Oceanic and Atmospheric Organization (NOAA) and are the same satellites used to monitor global weather patterns.

Attached to these satellites are special instruments designed to listen for, then determine the location of, the transmitters. For the satellite to determine the location of the transmitter it takes about 3-5 minutes, and the transmitter must be on the surface to be detected.

However, turtles rarely remain on the surface for long, and their surfacing must coincide with the satellite passing overhead. Thus it is common to go days without receiving a signal from a turtle's transmitter.

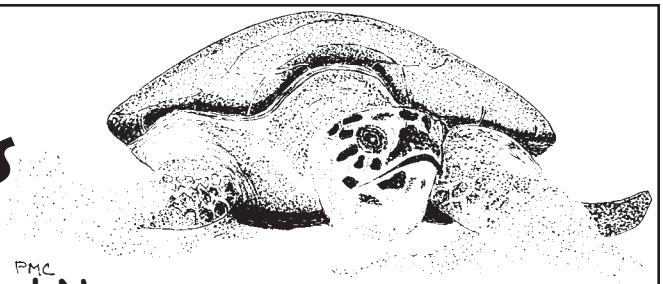
Using computers, researchers can use the information in the signal to plot the turtle's movements and determine what migration routes they travel and how fast the turtle swims. If the map a researcher is using has enough detail, it is also possible to determine the habitat characteristics at the turtle's location.

After monitoring a number of turtles in a specific population, researchers gradually learn where that population's major feeding grounds are located and what threats they may be facing at sea. This information allows conservationists to focus efforts on the most important areas.

Our members are invited to watch the movements of these satellite tracked turtles on the "Sea Turtle Tracking Education Program" section of the CCC web site at *www.cccturtle.org*.

If you have adopted a satellite tracked turtle as part of your membership, you can find your's turtle name, which is a link to their tracking map, under the list of current tracking projects.

Things You Can Do to Save Sea Turtles



Write a Letter to the Editor of Your Local Newspaper

Find out how to submit a "Letter to the Editor" to your local paper. Inform your community about the plight of sea turtles and other marine wildlife. The letters can ask for support for the Archie Carr National Wildlife Refuge or the Endangered Species Act. You might even let people know about this program. Check out our web site at www.cccturtle.org for more current issues affecting turtles and their habitat.

Reduce the Amount of Plastic Garbage You Produce

Check out how much garbage your family collects at home in a 24-hour period. Discuss how you can get through each day using less plastic— then agree to do it.

Tell People How Helium Balloons Harm Sea Turtles

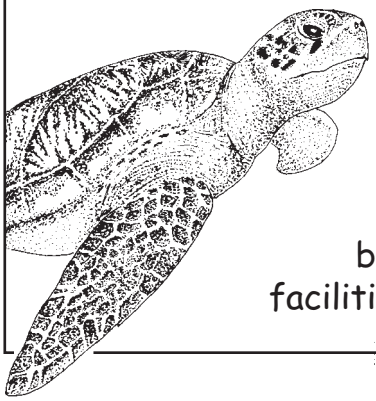
Helium-filled balloons are frequently released into the sky to celebrate events. Like plastic trash, helium balloons end up in the ocean, especially when released near the coast. Sea turtles mistakenly eat the balloons and die. When you hear of a group that is planning a balloon release, tell them it can injure sea turtles and other marine life. Ask them to consider another attention getter.

Write Letters to or Call Your Elected Officials

There are a number of ongoing issues affecting sea turtles that are being debated by Congress. You may also find issues in your state or region that affect sea turtles or their habitat. Check out our web site at www.cccturtle.org for current Action Alerts.

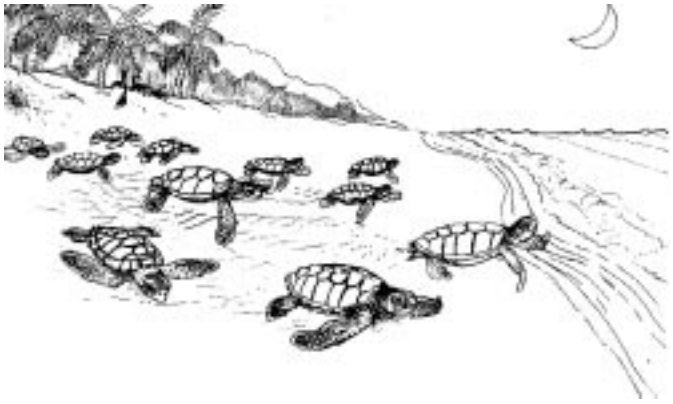
Fishing and Boating

When you are on the water, make sure you don't litter! In fact, keep a garbage bag handy to collect litter that others have left behind that may endanger marine life. If you fish, don't throw tangled line into the water! Try your best to get all of it out of the water and safely dispose of it.



Reduce the Amount of Chemicals You Use

Many people use chemicals and fertilizers on their lawns and gardens. Used motor oil and paints are deadly to plants and animals if not disposed of correctly. Many of these chemicals get washed into coastal lagoons and wash up on beaches. Find biodegradable lawn and garden products that you can use and facilities that properly dispose of toxic chemicals.

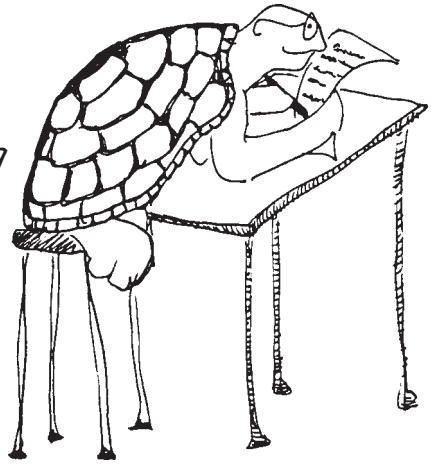


Become an Informed Turtle Advocate

Try to gain a basic understanding of the legislative process. Know who your legislators are and how to contact them. If you have internet access, information on the federal committee process, how bills become law and current legislators can be found at http://www.thomas.loc.gov.

Remain aware of current issues and try to contact your legislator before the legislature takes action on it.

Tips for Writing Letters to Decision-Makers



Use different methods to contact your legislators including letters, phone calls, faxes, E-mails or personal visits. Personal letters and phone calls work best.

When writing letters:

Remember- original letters count the most. Express your views in your own words and, if possible, include a personal experience in your letter.

Address only one issue per letter and be brief. One page is perfect, but you could go to two. Legible handwritten letters are fine.

Your first paragraph should say where you live, why you are writing and what you want the person to do.

Be polite, even when you disagree strongly with the legislator.

Suggest a course of action and offer to help if you can.

Ask for a response. For example, "I look forward to hearing how you will vote."

When calling or visiting your legislator:

Plan carefully. Keep to the point and address only one issue. Make notes to stay organized.

Make an appointment for a visit rather than just dropping by.

Prepare a one-page fact sheet about your issue to leave with your legislator.

If You Live on the Coast or Visit a Turtle Nesting Beach on Vacation

- Don't walk on the beach with a flashlight or shine a light in a sea turtle's eyes. The light may cause female turtles to stop nesting, or other sea turtles nearby may be discouraged from nesting if there are lights on the beach.

- Don't take pictures using flashes. This high intensity light can be even more disturbing than flashlights.

- Stay out of sight of the turtle; otherwise you may scare her back into the sea.

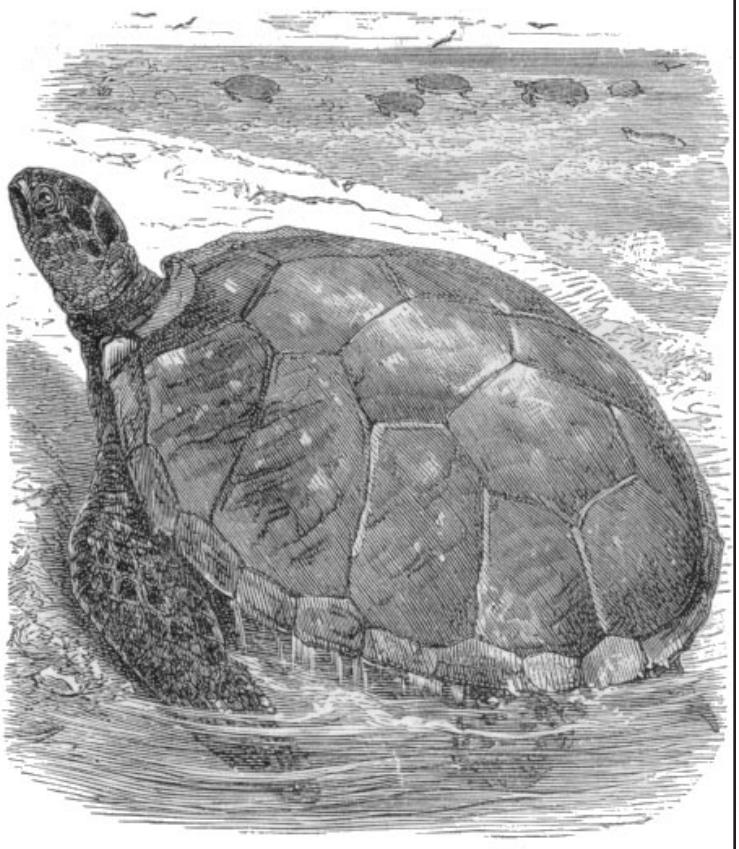
- For your safety, stay away from the turtle's head. Sea turtles have very strong jaws and can harm you if provoked.

- Don't handle eggs or put any foreign objects into the nest. You could introduce bacteria to the nest or injure the eggs.

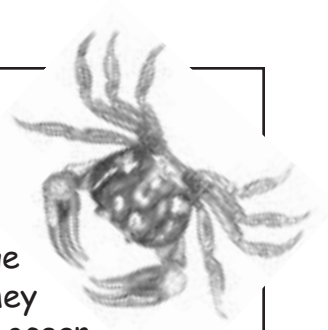
- Don't handle or ride the sea turtle. In addition to being illegal, you may injure the turtle or cause her to leave without finishing nesting.

- Don't disturb tracks left by turtles. Researchers use the tracks to identify the type of turtle that nested and to locate and mark the nests.

- Do try to arrange to be a part of a turtle walk with a trained, permitted guide. Call STSL at 1-352-373-6441 for information on Florida turtle walks.

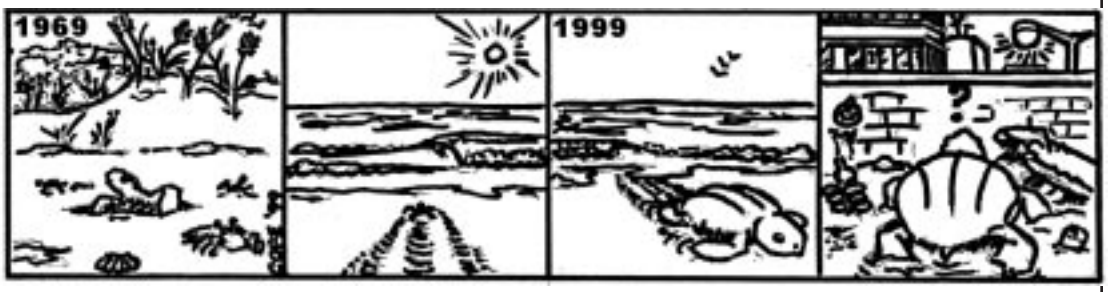


Issues Affecting Sea Turtles



Beach Front Lighting- U.S. beaches are rapidly being lined with seaside condominiums, houses and hotels. Lights from these developments discourage females from nesting and cause hatchlings to become disoriented because they instinctively head toward the brightest horizon, which should be the moonlit ocean. Beachfront lighting instead causes them to disorient and wander inland where they often die of dehydration or predation. The CCC works to establish stringent lighting ordinances in all Florida's coastal counties and monitors their enforcement.

Coastal Armoring- coastal armoring includes structures such as sea walls, rock revetments and sandbags that are installed in an attempt to protect beach front property from erosion. These structures often block female turtles from reaching suitable nesting habitat and accelerate erosion farther down the beach. Armoring is especially problematic along the east coast of Florida where beach development is occurring in the very places where sea turtles come to nest in the thousands. CCC works to prevent the installation of these structures and seeks turtle-friendly alternatives.



Beach Nourishment- beach nourishment consists of pumping, trucking or otherwise depositing sand on a beach to replace what has been lost to erosion. While beach nourishment is often preferable to armoring, it can negatively impact sea turtles. If the sand is too compacted for turtles to nest in or if the sand imported is drastically different from native beach sediments, the nest-site selection, digging behavior, incubation temperature and the moisture content of nests is affected. If allowed to proceed during nesting season, nests can be buried too far beneath the surface or run over by heavy machinery. CCC works with Florida's coastal counties to ensure planned renourishment projects do not negatively affect sea turtle nesting.

Fibropapillomatosis (FP)- a deadly disease that may be linked to pollution in the oceans and nearshore waters, and is found most commonly in juvenile green turtles. FP is killing turtles around the world- it has been reported in Brazil, Hawaii, Australia and Florida. Infection rates have been as high as 90 percent of the population in some areas. Turtles infected with FP develop tumors over their eyes, mouth and nose that lead to their death from starvation. CCC has worked to establish a state resolution that research into the cause of FP in Florida is a matter of pressing concern.

Turtle Excluder Devices (TEDs)- TEDs are devices that are sewn into shrimp trawl nets to allow turtles to escape the net rather than slowly drowning. Claims have been made that these devices may be 97 percent effective in reducing the incidental capture of sea turtles, while only reducing shrimp harvest by 2 - 3 percent. However, the *repeated* capture of turtles by shrimp trawl nets does lead to their eventual death. CCC works to improve the enforcement of TED regulations.