



Strewn along the length of the Florida Keys in ocean depths ranging from 20 to 130 feet are several notable shipwreck and artificial reef sites, some centuries old. March 2016 marks 30 years since the 189-foot Thunderbolt, a popular Middle Keys shipwreck, was intentionally sunk 4 miles south of Marathon and Key Colony Beach.

Then named the Major General Wallace F. Randolph, the vessel was launched June 2, 1942, as one of 16 sister ships built as mine planters to guard coastal minefields for the U.S. Army. The Randolph's duties were transferred to the Navy, yet it was never commissioned and remained idle in a Naval Reserve fleet.

In later years Florida Power and Light Co. used the renamed Thunderbolt as a cable layer for researching electrical energy and lightning strikes, and eventually donated the vessel to the Florida Kevs Artificial Reef Association.

Since its intentional sinking March 6, 1986, the easily navigable "T-bolt" has been considered the queen of the Marathon wreck fleet. It lies in 120 feet of water, providing advanced divers as well as spear fishermen an interesting deep site.

The ship was stripped of all but a few pieces of equipment before sinking. Its most prominent features are a cable-handling reel centered on the forecastle at approximately 80 feet and an observation deck at 75 feet. Aft, the rudder and propellers sit at 120 feet. The stern was cut away to expose the hull's interior.

The Thunderbolt is one of the vessels included in the "Wreck Trek Passport Program," rewarding advanced- and wreck-certified divers who complete a series of nine Keys shipwreck dives featured in an official Florida Keys Wreck Trek logbook.

Divers who complete one wreck dive in each of the five regions of the Keys are mailed a personalized print of Florida Keys shipwrecks. Those who dive the entire logbook earn the print as well as a chance to win dive equipment and accessories or Florida Keys dive and lodging packages.

Participants can complete the nine dives with professional operators during one stay in the Keys or on multiple trips. The Florida Keys Wreck Trek program continues through January 2016.

fla-keys.com/diving/wrecktrek





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"Keys Traveler" is published and ©2015-2016 by the Monroe County Tourist Development Council, the official visitor marketing agency for the Florida Keys & Key West. Director: Harold Wheeler; Sales Director: Stacey Mitchell; Dive Market Sales Manager: Yves Vrielynck; Keys Dive Umbrella: CeCe Roycraft, chair; Pam Meyer, Kim Roney, Amy Slate and Mary Threlkeld.





Cover photo of The Aquarium, a magical reef off Key Largo, by Tim Grollimund

Diving in the Florida Keys: From Intro to Pro

he Florida Keys, a 125-mile island chain located parallel to the continental United States' only living coral reef, offer perfect teaching grounds to learn new skills or enhance abilities as a scuba diver, providing a lifetime of fun, adventure and memories.

Learning options range from introductory one-day resort courses through full certification and a wealth of dive specialties including navigation, night diving, wreck diving, digital photography and coral reef conservation. Programs also are offered for those who want to take diving from a hobby to a career as a dive instructor. Here are some guidelines.

Who can learn to dive? Scuba diving is a sport, an investment in adventure that any healthy and active individual as young as age 10 can learn and enjoy. Diving is an exciting and rewarding sport for recreational enthusiasts and can serve as a career-changing step.

Dive instructor students of varying

ages learn how to teach others the exciting sport and make money at something they love to do. Instructor training in the Florida Keys means learning in a dive destination unparalleled anywhere in the United States — one of the few places in the country to provide such training year-round.

Newly "graduated" instructors can work fulltime in the Keys or find exotic jobs onboard cruise ships or live-aboard dive vessels throughout the world, teaching their own students the mechanics, safety and other aspects of recreational scuba diving.

What classes are available? The Florida Keys have it all. Entry-level openwater certification involves three to five days of training and classroom work



country to provide such Successful completion of pool-based classes leads to open-water training year-round training and certification for scuba divers.

covering concepts such as basic physics and physiology, ocean waves, marine life and the importance of monitoring time and depth during a dive, followed by open-water dives at the reef. Students also learn about navigation around natural formations.

Refresher courses review diving knowledge and water skills for infrequent divers, and for those seeking advanced skills and scope of experience to gain confidence with specific open-water dives. Dozens of specialty courses, dive master and professional career development take training to the highest level.

Where do students receive dive training? Some of the first businesses offering recreational dive training in America were established in the Florida Keys. Dozens of dive operators are staffed with working professionals who actively teach and train each day — not intermittently or seasonally.

When are classes offered? A primary advantage of the Keys over any other U.S. destination is year-round subtropical weather and clear, warm seas to practice skin diving and scuba skills virtually any day of the year. Training conditions are nice and easy, with light currents and great underwater visibility.

Why dive the Keys? Ocean depths from the shoreline to the reef rarely reach 20 feet. The reef lives in waters as shallow as 5 feet and as deep as 50 feet, but most reef divers log a maximum depth of 20 to 30 feet. Keys shallow diving offers two immediate benefits: longer time safely spent on the bottom exploring and colors that are brighter and more vibrant because more natural sunlight reaches shallow depths.

Only in the Florida Keys

Blue Star-recognized charters are dedicated to coral reef education and conservation.

The voluntary recognition program was established by the Florida Keys National Marine Sanctuary to promote responsible dive tourism. Dive operators in the program teach divers and snorkelers in-water etiquette such as practicing good buoyancy, careful hand and fin placement, and avoiding contact with coral

Blue Star-rated operators display a flag or decal with the program's logo on their charter vessel.

While Blue Star is focused on inwater activities, divers can learn about the fascinating history of their sport at the Florida Keys History of Diving Museum.

The Islamorada-based facility collects, preserves and displays relics and artifacts that trace man's quest to explore the underwater world.

Florida's only museum of its kind, the

facility was founded by Women Divers Hall of Fame member Dr. Sally Bauer and her late husband Dr. Joseph Bauer. Special events in 2015 and 2016 are to commemorate its 10-year anniversary.

Museum visitors come within inches of the earliest diving machines, including a full-scale replica of an all-wood diving bell; the Parade of Nations, an unparalleled collection of 25 historic hard-hat dive helmets from around the world; and exhibits illustrating the significant contributions made by men and women

in the progression of modern-day scuba diving and underwater exploration.

The museum is open daily 10 a.m. – 5 p.m. Regular admission is \$12 per adult, \$6 for children age 5-12 and free for kids under five and

active-duty U.S. military personnel. Special rates for seniors, groups and retired U.S. military also apply.

divingmuseum.org floridakeys.noaa.gov/onthewater

arboring the only living coral barrier reef in the continental United States, the Florida Keys are largely devoted to maintaining the region's offshore environment.

Conservation efforts began in 1960 with the dedication of John Pennekamp Coral Reef State Park, the nation's first undersea park, off Key Largo. Park waters lie within the Florida Keys National Marine Sanctuary, established in 1990.

Today, the venerable sanctuary comprises 2,900 square nautical miles of coastal waters from northernmost Key Largo south to the Dry Tortugas. Sanctuary Preservation Areas established as protected no-take zones enable fish and crustacean populations to thrive and grow.

A "Become a Reef Explorer" program offers a fun way to experience several bountiful reefs between Key Largo and Key West. It is common for divers and snorkelers to spot sea turtles, stingrays, goliath groupers, nurse sharks or bright green moray eels among barrel sponges and sea fans.

Popular reefs off Key Largo include Carysfort Reef, Elbow Reef, Grecian Rocks, French and Molasses reefs — many characterized by high profile tongue-and-spur, brain and pillar corals. Cleansing Gulf Stream waters keep visibility consistently high.

Islamorada highlights include Pickles Reef, Hens & Chickens, Alligator and Conch reefs. At Crocker Reef depths range from 30 to 60 feet and its south end slopes along a wall of spur-and-groove coral formations and coral mounds.

Marathon's notable shallow patch reefs and spur-and-groove formations include Sombrero Reef, marked by a large lighted tower; Yellow Rocks, Porkfish, Samantha's and Horseshoe reefs, and Coffin's Patch that features six unique coral species.

Looe Key Reef in the Lower Keys is an area of the sanctuary approximately 6 miles south of Big Pine Key. A complete reef ecosystem is found between 20 and 40 feet, from a rubble ridge of ancient fossilized corals to a reef flat composed of turtle grass and a fore reef made up of large star and brain corals. Farther out is American Shoals, favored for its lighthouse structure, corals and abundant marine life.

Key West's largest protected coral reef is Western Sambos, part of an ecological reserve created in 1997. Several other extensive shallow reefs off Key West, including Eastern Dry Rocks, Rock Key and Sand Key, are abundant in corals, gorgonians and fish, and range from 5 to 45 feet in depth.

The Keys boast an unparalleled variety of marine life and abundance of fish species and consistently clear, warm waters to suit virtually every diver.

Reef-responsible divers and snorkelers can ensure that the Florida Keys remain a great environmental treasure for generations to come.



Become a Keys Reef Explorer



Beginners, seasoned divers and snorkelers can become Reef Explorers. After visitors arrive in the Florida Keys, they can ask any dive or snorkel operator for a complimentary Reef Explorer Guide. The guide highlights coral reefs from Key Largo to Key West. To participate, divers collect a stamp from operators they book a reef excursion within each of the Keys' five regions. After participants collect one stamp in each region, they can email reefexplorer@fla-keys.com to receive an access code to download, personalize and print a frame-ready Reef Explorer poster.

fla-keys.com/diving/reefexplorer



Snorkeling Opens Up Keys Underwater World

eaturing vivid coral reefs teeming with exotic sea creatures, the Florida Keys offer a vacation paradise that attracts almost a million snorkel and scuba aficionados each year who can't wait to get into the water and explore — even as first-timers.

Snorkeling primarily requires a mask, snorkel, fins for propulsion and inflatable snorkeling vest to enjoy a day of underwater sightseeing. Professional snorkel charters rent equipment and provide instruction. Add a T-shirt or sunblock and you're set to go.

Spectacular coral reefs are a short boat ride from the islands, located in shallow water that's often just 10 to 15 feet deep.

Some favorite marine sites include the nation's first undersea park, Key Largo's John Pennekamp Coral Reef State Park, and nearby, the 9-foot-tall 4,000-pound bronze statue known as "Christ of the Deep." The underwater shrine stands on a concrete base in approximately 25 feet of water and was installed in 1965.

French Reef and Davis Reef, also off Key Largo, are easily navigable along the top of the reef and sandy ledges. Grouper and moray eels cruise among the cliffs and canyons, gullies and archways at depths from 15 to 40 feet.

Off Islamorada, Alligator Reef boasts huge populations of yellowtail snapper, grunts, goatfish and damselfish and a mini-wall where lobsters hide in crevices.

Among Marathon's notable patch reefs and spur-and-groove formations is Sombrero Reef, marked by a large



A snorkeler descends to examine the famous "Christ of the Deep" statue off Key Largo.

lighted tower. You might see a pair of spotfin butterflyfish circling in their courting dance, French angelfish nipping and pecking at reef plants, a huge school of grunts sliding back and forth in a gentle tidal surge or a stingray scouring the sandy bottom for a snack.

The Lower Keys' Looe Key Reef is one of the most spectacular shallow-water undersea environs in the region. Just 5.3 square nautical miles, this small area features a tremendous variety of coral structures and marine life.

Western Sambos is Key West's most

prominent protected coral reef. The popular snorkeling site is part of an ecological reserve created in 1997.

Several other extensive shallow reefs off Key West including Eastern Dry Rocks, Rock Key and Sand Key are abundant in corals, gorgonians and fish, and range from 5 to 45 feet in depth.

Snorkeling is the perfect family activity for visitors to the Keys for close, calm observation of the inhabitants of one of the world's most diverse, complex and beautiful ecosystems.

fla-keys.com/diving

Quirky Subsea Activities are All 'Just for Fun'

he Florida Keys host offbeat celebrations and quirky marine activities laced with messages of reef preservation and diver awareness.

The Lower Keys Underwater Music Festival is held each July at Looe Key Reef, located 6 miles south of Big Pine Key in the Florida Keys National Marine Sanctuary. In October divers can carve underwater jack-o-lanterns and each spring they "egg-splore" a reef for hidden eggs during an annual Underwater Easter Egg Hunt.

The continental United States' only living coral barrier reef

offers marriage-minded couples an opportunity to tie the knot with sea creatures in attendance — most notably, close to the welcoming arms of the 9-foot-tall "Christ of the Deep" statue near Key Largo's John Pennekamp Coral Reef State Park.

Divers also can learn how to identify up to 100 fish found in Florida Keys waters through free interactive fish behavior and ID classes led by local underwater photographers and become "citizen scientists" by participating in volunteer fish survey projects. Divers and snorkelers can add their surveys to an online database used by scientists around the world.



Kayla Ripple, nursery program manager, tends to the Coral Restoration Foundation's coral nursery off the Upper Keys.

ivers play a significant role as stewards of the world's oceans. They can give back to the living, dynamic ecosystem of the Florida Keys through "voluntourism" vacations, helping to protect the continental United States' only living coral barrier reef by volunteering for the greater good.

Recreational sport divers can join ongoing coral restoration and propagation efforts with marine scientists from Key Largo's Coral Restoration Foundation and Mote Marine Tropical Research Laboratory, a fully equipped facility located on Summerland Key as a substation of the Mote Marine Laboratory on Florida's west coast.

They learn about environmental impacts on the world's reefs through education, and participate in hands-on restoration dives. Endangered basebuilding corals include boulder, brain and star corals, and two branching species, staghorn and elkhorn, which can be propagated to create new habitats.

On working dives to coral nurseries, volunteers clean and prepare corals

for planting. An orientation dive at a restoration site shows firsthand the evolution of corals over time.

"This is something the average person can get their hands on and do," said CRF Director Ken Nedimyer. "Volunteers can take the experience back to their home communities — it is a grass-roots way of giving people ownership."

Capturing lionfish helps prevent the invasive Indo-Pacific species from voraciously preying on invertebrates and juvenile fish such as grunts and hamlets, and stealing resources from domestic species like grouper and snapper.



Spearing lionfish is the most effective way to reduce the invasive species' population.

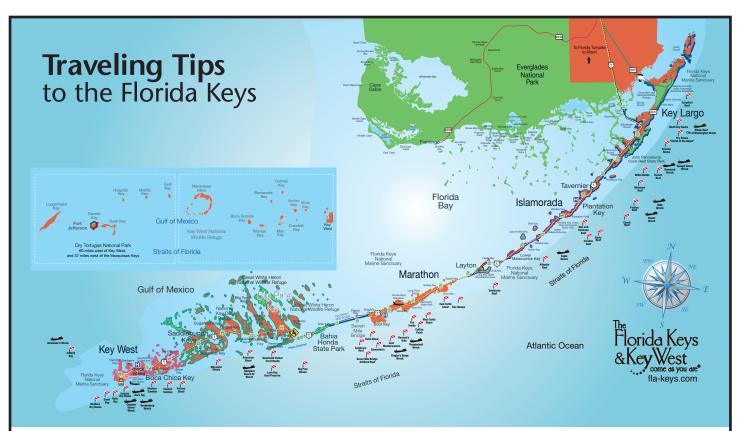
The popular aquarium fish, probably introduced to Florida waters during the 1980s, has no natural reef predators except humans.

The Keys' Reef Environmental Education Foundation, whose mission is to conserve marine ecosystems, partnered with the Florida Keys National Marine Sanctuary and the dive community to create awareness about the importance of capturing and removing lionfish from Keys waters.

There is no season or size limit for lionfish. Recreational lionfish roundups provide divers a chance to earn prizes, sample the tasty edible fish and help preserve reef ecosystems.

"For Keys visitors who enjoy our natural resources, this is hands-on action for them to help protect and preserve those organisms with these focused opportunities to remove lionfish," said REEF founder Lad Akins.

> coralrestoration.org • mote.org reef.org • myfwc.com/lionfish fla-keys.com/volunteer



The 125-mile-long Florida Keys island chain is linked to mainland Florida by U.S. Highway 1, the Overseas Highway. Visitors can fly into Miami International Airport (MIA) or Fort Lauderdale-Hollywood International Airport (FLL) and from there can reach the Keys by airport shuttle bus or rental car. Travelers can reach Key Largo, the gateway to the Keys, in about an hour from Miami or an hour and 45 minutes from Fort Lauderdale.

Air Service to the Florida Keys

For an up-to-date roster of commercial airlines and on-demand charter operators serving Key West International and Florida Keys Marathon International Airports, go to fla-keys.com/gettinghere/#air.

Driving Directions

From Miami International Airport (MIA), take LeJeune Road south to 836 West. Take the Florida Turnpike south toward Key West.

The Turnpike ends at U.S. 1 in Florida City. Follow U.S. 1 south about 22 miles to Key Largo and you are now in the Florida Keys.

From Fort Lauderdale—Hollywood International Airport (FLL), exit the airport and follow the signs for I–595 West. Take 595 to the Florida Turnpike and follow the signs for the Florida Keys.

From further north, take the Florida Turnpike south to just below Fort Lauderdale, where Exit 4 joins the southern portion of the Turnpike, that ends at U.S. 1 in Florida City. Follow U.S. 1 south into the Keys.

From Florida's west coast, take I-75 (Alligator Alley) east to the Miami exit, and south to the Turnpike Extension.

Driving Data to Keys/Key Largo

FROM	MILES	KM	HOURS
Miami	50	80	1
Fort Myers	200	320	4
Tampa	300	480	6
Orlando	280	450	5.25

Distance from Miami

REGION	MILES	KM	MILE MARKER
Key Largo	50	80	107-90
Islamorada	76	122	89–66
Marathon	111	178	65-45
Lower Keys	128	205	45-4
Key West	159	254	4–0

Via Bus

Bus/shuttle connections from MIA and FLL to the Florida Keys also allow traveling to the Keys without renting a car.

Via Boat

Ferry connections from Fort Myers or Marco Island to Key West are offered via the Key West Express. Voyages take approximately 3.5 hours.

Extensive details on getting to the Florida Keys & Key West are available at:

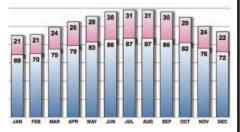
fla-keys.com/gettinghere.cfm

Weather/Climate

Wherever you are right now, chances are the weather is better in the Florida Keys. That's true even on a summer day. The hottest it's ever been in Key West is 97° F (36° C), and that was in 1880. At the peak of summer, the average high air temperature is about 89° F (32° C). The Keys are devoid of superhighways or urban sprawl to absorb and radiate the sun's heat. And the subtropical islands are cooled by sea breezes.

In the winter, the Keys are typically the warmest region in the continental U.S. There has never been a frost in Key West, according to the U.S. Weather Service.

Below are the average monthly air temperatures for the past 30 years, according to the Key West weather office. Temperatures in blue shades are Fahrenheit and those in light red are Celsius.



Help and More Information

If you're traveling in the Keys and need any help, call the toll-free Visitors' Assistance line at 1-800-771-KEYS. It's staffed 24 hours a day. To contact visitor offices in the Keys, call 1-800-FLA-KEYS. The Keys website at fla-keys.com has a live chat feature with visitor information specialists available during regular U.S. weekday business hours to aid travelers in vacation planning.