

REEF RELIEF®

CURRENT PROGRAMS

- *Coral Photo Monitoring Survey & Archiving*
- *Coral Reef Conservation Program*
- *Clean Water Campaign*
- *Reef Relief Environmental Center*



• *Discover Coral Reefs School Program*

- *Green Turtle Cay Reef Mooring Buoy Program*
- *Captain Roland Roberts House Environmental Center*



JOIN REEF RELIEF®

Reef Relief relies on memberships, contributions and volunteer efforts. Join our grassroots efforts to save coral reefs.



BE A SEA FAN! Join Reef Relief for a minimum of \$30 and receive Reef Line, the Reef Relief newsletter and other members-only publications by US mail.

PROTECT ENDANGERED CORAL CAMPAIGN \$50 Membership entitles you to an exclusive members-only t-shirt and bumper sticker reflecting your support for endangered corals.

BE A SEA TURTLE! \$100-\$249 A powerful and beautiful partner on the reef!

BE A DOLPHIN! \$250-\$499 Graceful and carefree, these are certainly one of the smartest partners of the coral reef.

BE AN EAGLE RAY! \$500-\$999 Majestic, magnificent, silent and strong, a memorable partner of the coral reef.

BE A CORAL HEAD! \$1000 + The very foundation of life on this planet.



Join Reef Relief's free online community at www.reefrelief.org. You'll receive regular news about coral reefs and opportunities to get involved.

Encourage others to get involved. If we all do our part, we can insure healthy ocean waters, abundant fisheries and healthy coral reefs.

SPECIAL THANKS TO:



Best Western Hibiscus Motel
1320 Simonton St, Key West
800-972-5100



REEF RELIEF®

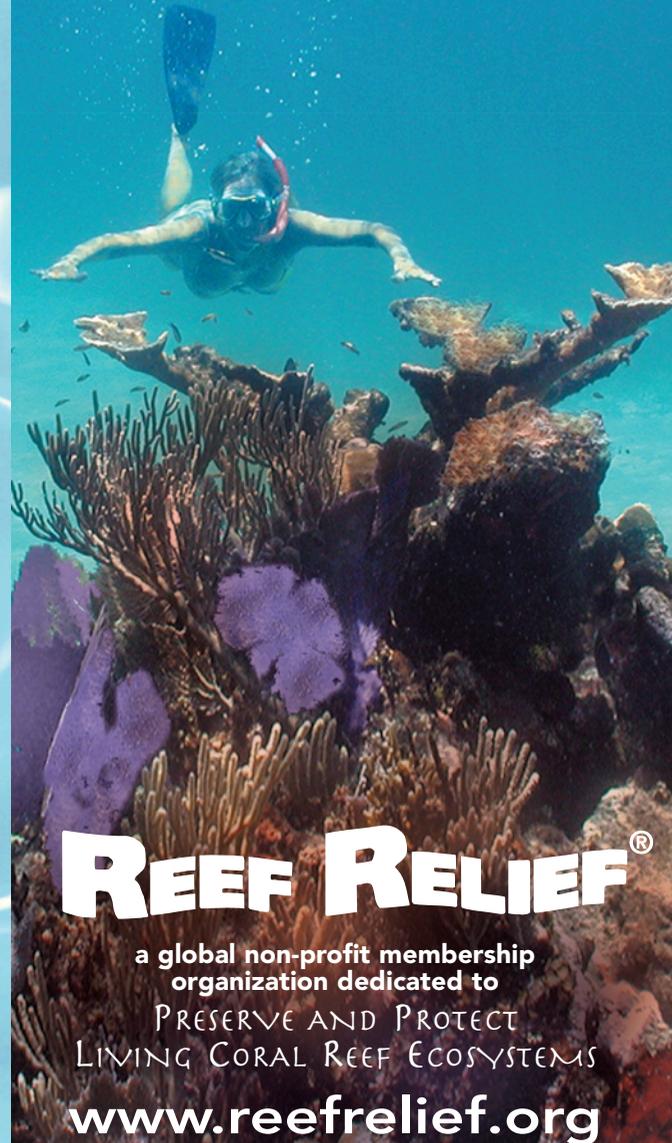
a global non-profit membership organization dedicated to "Preserve and Protect Living Coral Reef Ecosystems."

Write to Reef Relief at P.O. Box 430, Key West, FL. 33041-0430.
(305) 294-3100. Fax 293-9515, e-mail reef@reefrelief.org

www.reefrelief.org

Printed on recycled paper.

CORAL REEFS



REEF RELIEF®

a global non-profit membership organization dedicated to PRESERVE AND PROTECT LIVING CORAL REEF ECOSYSTEMS
www.reefrelief.org

VISIT THE REEF RELIEF® ENVIRONMENTAL CENTER

Learn about the living coral reefs, the most biologically diverse ecosystems on earth!

Interactive Exhibits* Theater

631 Greene Street
behind the Conch Republic Seafood Company
At the Historic Seaport in Key West
(305) 294-3100

REEF RELIEF...

- Increases public awareness of the importance and value of living coral reef ecosystems
- Increases scientific understanding and knowledge of living coral reef ecosystems
- Strengthens grassroots, community-based efforts to protect living coral reef ecosystems;
- Designs, develops, and helps implement strategies for marine protected areas associated with coral reef ecosystems
- Encourages and supports ecotourism as part of sustainable community development that protects and preserves coral reef ecosystems;
- Works to strengthen its organizational ability to carry out this mission.



BEAUTIFUL & ALIVE



Coral reefs are delicately-balanced underwater environments home to fish, hard and soft corals, sponges, jellyfish, snails, lobsters, rays, sea turtles and other sea life. They are the oldest ecosystem on earth, yet they cover less than 1% of the total ocean. Corals have existed for over 400 million years and reached their current level of diversity 50 million years ago.

Corals are made of millions of tiny slow growing animals called *coral polyps*. It takes years for some corals to grow an inch. They grow on the limestone remains of former colonies to create the massive reef formations. An algae called zooxanthellae gives the coral its color and lives within the host polyp.

Corals are divided into two kinds. *Hard corals* such as brain, star, staghorn, elkhorn and pillar corals have rigid exoskeletons, or corallites, that protect them.

Gorgonians, or *soft corals*, such as sea fans, sea whips and sea rods, are filter feeders that sway with the currents and lack an exoskeleton. The Coral Reef Ecosystem includes coral reefs, mangroves and seagrasses and each depends upon the other.

North America's only coral barrier reef lies about 6 miles offshore and parallels the Florida Keys, a 158-mile string of islands.

Coral reefs deserve protection for their intrinsic natural value. In addition, they provide food, economic and tourism benefits to mankind, protect our shorelines from storms, support indigenous communities, provide habitat for endangered species, and improve our quality of life.

FRAGILE & ENDANGERED

Coral, for all its sturdy appearance, is fragile and vulnerable. Reefs can only survive in clean, clear, nutrient-free tropical oceans, usually between 25 degrees north and south of the equator. They depend upon light for photosynthesis. Any condition that reduces the clarity of the water, such as sediment or pollution, prevents healthy coral growth.

Coral reefs around the world are experiencing severe decline due to multiple impacts.

CORAL REEFS ARE DAMAGED BY...

Physical impacts

- Anchors dropped on corals and seagrasses
- Accidental boat groundings and prop dredging
- Diver/snorkeler impacts from fins, hands or equipment
- Marine debris that smothers corals and strangles marinelife that ingests it

Overharvesting and habitat loss

- Coral and live rock is used for construction and the aquarium/curio trade
- Destructive fishing techniques
- Over-harvesting of fish and tropical marinelife

Water quality decline from pollution

reduces visibility and oxygen and increases bacterias and pathogens as well as chlorophyll levels in the water, causing coral diseases and harmful algal blooms.

Common sources of pollution include:

- Agricultural runoff – pesticides & fertilizers
- Inadequate sewage and stormwater treatment
- Siltation from coastal development
- Beach renourishment projects
- Sewage, oil, or toxic discharges from boats



Global climate change

- Warming ocean waters increase the severity and extent of coral diseases and trigger coral bleaching, a stress syndrome that causes corals to expel their symbiotic alga and turn white.

TIPS FOR DIVERS AND SNORKELERS

- Snorkel aware, dive with care! Before booking a reef trip, check out weather conditions. It's best not to go out in rough seas. Poor visibility, strong winds and waves reduce safe interaction at the reef.



- Remember that even the lightest touch with hands or equipment can damage sensitive coral polyps.
- Snorkelers should wear float coats—inflatable snorkel vests—to allow gear adjustment without standing on the coral. Never stand up on a coral reef!
- To avoid contact with the ocean bottom, divers should only use the weight needed and practice proper buoyancy control. Areas that appear empty may support new growth if left undisturbed.
- Avoid wearing gloves and touching or collecting marine life. Most tropical fish captured die within a year. In Florida, Queen conch and coral are protected species, and cannot be taken. Buying them at local shops only depletes reefs elsewhere in the world.
- Resist the temptation to feed fish; it changes the natural behavior and diet of the fish and is illegal in Florida waters.

TIPS FOR BOATERS & FISHERMEN



- Before heading out, check weather conditions. It's best not to go out in rough seas.
- Dumping trash at sea is illegal; plastic bags and other debris can injure or kill marine animals. Try to retrieve fishing gear and equipment, especially monofilament line.
- Use sewage pumpout facilities and biodegradable bilge cleaner and never discharge bilgewater at the reef. Florida Keys state waters are a No Discharge Zone for boater sewage.
- Use reef mooring buoys or anchor in sandy areas away from coral and seagrasses so that anchor, chain, and line do not contact or damage coral or seagrasses.
- Practice good seamanship and safe boating. Accidental boat groundings damage the reef. Consult tide and navigational charts and steer clear of shallow areas. Boat propellers can cause seagrass scars, damage coral and result in fines. Avoid reefs and seagrasses that appear brown; stay in white sandy areas.
- If you run aground: turn the engine off, and tilt it up if possible. Do not try to motor off. Wait until high tide to remove the vessel. Call for assistance when necessary.
- When in a dive area, slow down to an idle speed. Fishermen, do not troll over or near divers. Stay at least 100 feet from a red and white diver down flag and watch for bubbles. Boaters, maintain safe distances from fishermen.
- Florida law requires a fishing license. Applicable size, bag limits, and seasons must be observed when harvesting seafood. Release all the fish you cannot eat and consult state and federal authorities for current regulations.
- Avoid wildlife disturbance; stay 100 yards or more offshore; keep speed, noise and wakes to a minimum near mangroves. Camping, campfires and collecting of any kind are prohibited on all National Wildlife Refuges. Personal watercraft and airboats are illegal in all National Parks and Wildlife Refuges in the Florida Keys.

- The Florida Keys National Marine Sanctuary is a marine protected area for Florida Keys coral reefs. A zoned management system is established with certain rules for special areas and regulations. For more information, contact the FKNMS at www.fknms.nos.noaa.gov, call (305) 809-4700, or visit the Nancy Foster Eco-Discovery Center, 33 East Quay Wall in Key West.