

U.S. Virgin Islands

CARIBBEAN DIVISION | THE WORLD WE DEPEND ON DEPENDS ON US

From fragile reefs to endangered sea turtles this Caribbean paradise needs protecting

At about 134 square miles, the U.S. Virgin Islands is not expansive when compared with many archipelagos, but it is brimming with enough natural beauty to fill an area several times its size. This U.S. territory consists of three main islands — St. Croix, St. John and St. Thomas — that boast verdant hillsides and breathtaking beaches surrounded by colorful coral reefs woven through crystal waters.

These islands are home to hundreds of species of plants, fish and birds, as well as endangered sea turtles that rely on the islands' shores to nest. Millions of tourists visit each year to explore the rich natural treasures of these islands, supporting local economies, livelihoods and communities. In fact, the tourism sector in the U.S. Virgin Islands constitutes almost 32 percent of Gross Domestic Product and supports 29 percent of employment. However, the impacts of climate change, overfishing and unsustainable coastal development all pose grave threats to people and nature in this Caribbean paradise.

The Nature Conservancy has been working in the U.S. Virgin Islands since we first began to address conservation challenges in the Caribbean more than 40 years ago. Almost three decades ago, the Conservancy established a nature preserve on St. Croix called Estate Little Princess, which became the headquarters of our Virgin Islands' program. Today, the Conservancy is implementing ecosystem-based solutions to conserve the vital marine and coastal habitats, like coral reefs and mangroves, that protect vulnerable shorelines, support livelihoods, preserve biodiversity and safeguard wildlife.





A New Era for Coral Conservation

The U.S. Virgin Islands was one of the first areas of the Caribbean where the Conservancy began its coral restoration work. **As in the rest of the region, coral reefs in the Virgin Islands are essential for a healthy ocean, thriving economies and prosperous communities.** They also provide coastal protection against the impacts of climate change like erosion, flooding and dangerous tropical storms. However, increased ocean temperatures and acidity, overfishing and pollution have damaged reefs in the Virgin Islands to the point that they are struggling to survive. **Populations of elkhorn corals, a key reef-building species, in parts of the Virgin Islands have decreased by 90 percent since the 1980s.**

TNC has been conducting coral restoration in the Virgin Islands since 2009. The opening of our Coral Innovation Hub, a new laboratory dedicated to advancing coral science in the Caribbean and globally, celebrated its grand opening in May of 2022. Located at Estate Little Princess—a historic plantation site situated northwest of Christiansted on the island of St. Croix—the Hub serves as a center for innovative approaches to coral conservation. There, we have been developing, testing and implementing techniques such as coral microfragmentation and facilitated sexual reproduction with the aim of growing large numbers of new corals faster than ever while increasing genetic diversity in order to promote ecological resilience.

The Hub's efforts, funded largely by public grant monies, are focused on coral restoration at scale to increase both ecological and coastal resilience. Our primary projects include restoring roughly 50 acres of coral reef habitat within the St. Croix East End Marine Park, as well as a pilot restoration project at Buck Island Reef National Monument

The Coral Innovation Hub serves as an incubator for ideas on global coral conservation and a collaborative space to work with outside institutions on the latest research in coral conservation. It not only plays an essential part in advancing coral conservation science and technology but also plays a vital role in disseminating these advancements through an interdisciplinary network of conservationists, scientists, partner organizations, local stakeholders and educational institutions. By sharing our expertise and engaging diverse audiences in this way, the Conservancy aims to mobilize unprecedented coral conservation action across the globe.



CLOCKWISE Young staghorn corals outplanted by the Conservancy thrive on a reef in St. Croix. © Kemit-Amon Lewis/TNC; Conservancy scientists and partners prepare healthy, young staghorn corals for transport to a damaged reef. © Jennifer Idol; Elkhorn coral gametes collected during the Conservancy's coral spawning expedition in St. Croix © Paul Selvaggio



Virgin Island Land Management and Preservation

Our Jack and Isaac Bay Preserve, at the eastern point of St. Croix, consists of 300 acres of rolling hills skirted with white beaches, crystal waters, and vibrant coral reefs. Its shores serve as important nesting sites for sea turtles, which were once abundant throughout the Caribbean; now, all seven species are endangered due to habitat loss and poaching. The Nature Conservancy carefully monitors the turtle nests to protect against interference and predators. By providing safe and healthy habitat, we have helped significantly increase the number of nesting turtles. Today, the largest populations of endangered green and hawksbill turtles on St. Croix find shelter at Jack and Isaac Bay Preserve.

To benefit both land and sea, we are restoring the endangered St. Croix agave (*Agave eggersiana*) along the hills of the preserve. This endemic plant was once prevalent on the island but was cleared from the land in the 18th century for sugarcane cultivation, nearly causing it to vanish completely. Planting St. Croix agave, along with other native vegetation, helps stabilize the hillsides to prevent soil from seeping into the ocean, where it can harm coral reefs and weaken shorelines. Through our holistic approach, we support vital ecosystems where countless plants and animals, including threatened species, can thrive—and where people can enjoy a unique, unspoiled corner of nature.

Magen's Bay is one of the most valuable coastal areas in St. Thomas due to its natural and cultural value. The entire Magen's Bay watershed was designated as an Area of Particular Concern in 1979. The bay includes an important wetlands comprised of mixed swamps and mangroves that buffers flooding and storm surge. The mangroves also host fish nurseries boosting local reef health, and the local fisheries. Magen's Bay beach is one of the most popular in the Virgin Islands for tourists and locals providing both tourist revenue and public access to the water and the uplands through the only marked nature trail on the island. The spectacular views make Magen's Bay a desirable area for development, and multiple attempts had been made to build a resort prior to TNC's purchase.

The Nature Conservancy has preserved more than 700 acres of land in the U.S. Virgin Islands since 1975. TNC's major preserves provide access to nature so that Virgin Islanders and visitors can enjoy more than eight miles of trails with breathtaking views and pristine beaches. Our St. Thomas and St. Croix preserves receive more than 100,000 visits each year and are listed below

- Estate Little Princess – St. Croix
- Jack and Isaac Bay Preserve – St. Croix
- Magen's Bay Preserve – St. Thomas
- Little St. Thomas – St. Thomas

The Conservancy is also using innovative technology to monitor marine habitat and inform protections.

BleachWatch, a mobile app launched by TNC, allows divers and snorkelers to report coral disturbances, such as bleaching or disease, and is being used to guide marine protection and habitat restoration efforts in the U.S. Virgin Islands. In addition, the Conservancy helped develop and implement state-of-the-art marine spatial planning tools that allow those who manage protected areas in the U.S. Virgin Islands to make informed, science-based decisions that improve long-term marine management.



Protecting Wildlife

Established by the Conservancy in 1999, the Jack & Isaac Bay Preserve on St. Croix is comprised of fragile ecosystems that provide a home to endangered sea turtles; several varieties of coral, starfish and conch; and over 400 species of fish, including parrotfish, blue tangs and four-eyed butterfly fish.

Sea turtles were once so abundant in the Caribbean that early mariners recorded extreme difficulty navigating their boats around them in the ocean. Today, loss of habitat, invasive species, poaching, pollution and fishery activities have devastated their populations. In the early 1990s, it was determined that one-third of all sea turtle nests were lost to these threats. **The Conservancy has been at the forefront of efforts that have resulted in strong signs of recovery in the sea turtle population on St. Croix.** A Sea Turtle Conservation Program was put into place at Jack & Isaac Bay Preserve, raising the number of green sea turtles nesting at the site from about eight to over 300 by removing the threats of poaching and coastal development. Today, the largest nesting populations of green and hawksbill sea turtles on St. Croix are found at Jack & Isaac Bay Preserve.

Supporting Education

The Nature Conservancy is restoring coastal and coral habitats across the Caribbean and building capacity among students, communities, and governments in marine conservation. In St. Croix, U.S. Virgin Islands, we lead one of the world's most extensive coral restoration initiatives from our state-of-the-art Coral Innovation Hub. Here, we are catalyzing leading coral science and training the next generation of Caribbean conservationists.

Our multi-year effort to restore 90 acres of healthy reefs includes fellowship and internship programs for local college and graduate students to gain meaningful career skills and experiences for schoolchildren and community members to learn about coral reefs and coastal resilience. We support:

- Three fellowships for recent USVI high school graduates and college students to come to the lab and participate in restoration activities.
- Full tuition for 1-2 graduate students in Marine and Environmental Science at the University of the Virgin Islands and a year of applied experience at the lab
- Membership for students in the Black in Marine Science network, including mentorship opportunities and connection to higher education and jobs.
- Community Days at our lab to share information about coral and marine restoration, climate resilience, and other science, featuring fellows and interns. About 100 participants are expected at each Community Day.
- Annual field trips for local 5th grade classes; 10 youth snorkel clinics; and annual field trips to the St. Croix EcoFair.

Looking ahead, the Conservancy is committed to building a more resilient U.S. Virgin Islands in the face of climate change by strengthening coastal habitats like coral reefs. **Working with our partners, we aim to restore reef ecosystems in the U.S. Virgin Islands so that the majestic reefs of only a few decades ago are not just a memory but a reality within our grasp. Through this work, along with protecting the islands' waters and vast array of wildlife, the Conservancy will help preserve biodiversity, safeguard shorelines and sustain livelihoods for the benefit of nature and people in the U.S. Virgin Islands.**

INSET An endangered sea turtle hatchling at Jack & Isaac Bay Preserve is helped from its nest by a Conservancy scientist. © Kemit-Amon Lewis/TNC

Sea turtle hatchlings emerge from their nest at night. Once out of their nest, they orient themselves toward the sea and make a dash for the water. They go through a process called fingerprinting, where they take in cues to help them return, as adults, to the same beach to nest. Some hatchlings don't make it out of their nest with their siblings and end up falling prey to predators. Here, a Conservancy scientist helps a struggling hatchling make its way out of the nest before allowing it to crawl into the ocean — giving this little endangered mariner a second chance at life.



OUR MISSION: TO CONSERVE THE LANDS AND WATERS ON WHICH ALL LIFE DEPENDS



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CONTACT The Nature Conservancy in the Caribbean

Jeamir Diaz
Associate Director of Development
jeamir.diaz@tnc.org

Jessica Ward
Director, Virgin Islands Program
jessica.ward@tnc.org