

# TROPIC NEWS

DEPARTMENT OF PLANNING AND NATURAL  
RESOURCES

DIVISION OF FISH AND WILDLIFE

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## Artificial Reefs

Artificial reefs have been widely used in an attempt to enhance fisheries potential through increasing amounts of habitat for fish. There has long been a controversy, however, over whether artificial reefs actually increase the number of fish or simply concentrate the number of fish in an area. Be that as it may, fisheries managers are looking at artificial reefs as management and mitigation tools to compensate for decreasing amounts of natural habitat.

On St. Croix, Division biologists have been studying the fish assemblages associated with artificial reefs and adjacent natural reefs. The artificial reefs in this study were emplaced off Butler Bay in the late 1970s and early 1980s. They are composed of a freighter, a barge, a tanker and a tug boat in water ranging from 13 to 33 meters (42 to 107 feet) in depth. Nearby natural reefs are in 10 to 15+ meters (32 to 49 feet) in depth.

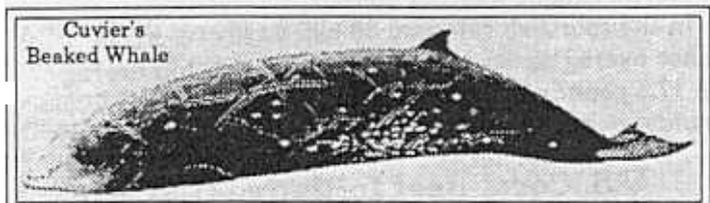
The objective of the study was to collect data on fish species and numbers on natural and artificial reefs and determine the ecological impacts and potential benefits or disadvantages of artificial reefs to VI fisheries. All data was collected by divers using visual census methods. The tanker was not sampled due to its depth.

The same number of species were found on both reef types but species composition was different. When each natural or artificial reef is looked at by itself, the numbers of species and numbers of fish are lower for the artificial reefs. The most common fish on the artificial reefs were damselfish. On the natural reefs, wrasses were most abundant. Parrotfish were more abundant on the natural reefs while groupers, jacks and goatfish were more abundant on the artificial reefs. Grunts, snappers and squirrelfish were equally common on both reef types.

Artificial Reef



There are several factors which affect what species, the number of species, and the abundance of fish that will colonize an artificial reef. These include size of the reef, size and number of holes in the reef (habitat complexity), and distance from natural reefs. The smaller the reef, the fewer and smaller the holes, and the greater the distance from a natural reef, the fewer fish will colonize it. While the St. Croix artificial reefs provide homes for many fish, their lower numbers may be related to the distance of these reefs from natural reefs and the low habitat complexity of the sunken vessels. By improving these factors, the value of artificial reefs can be increased.



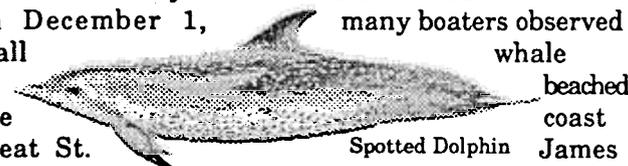
During the last thirteen years there have been only a few strandings of marine mammals in the Virgin Islands, mostly on St. Croix. A stranding is when a whale or dolphin either washes up on the shoreline or deliberately swims onto the shoreline. In most cases we are unable to determine the cause of these strandings. It is only when there is something obviously wrong with the animal that we can determine the reason.

Recently, we have had three strandings in the northern VI. On October 22 six Atlantic Spotted Dolphins beached themselves at Scott Beach on St. John. Two of the dolphins (possibly babies) were assisted by swimmers and swam away. One was attacked by a shark and died. The other three died on the beach. The bodies of these dolphins were sent to Puerto Rico where the Caribbean Stranding Network is studying them to try and determine the cause of the stranding.

Approximately one week later, a single, badly decomposed dolphin was found on Lovango Cay off St. John. The species has not yet been determined.

On December 1, many boaters observed a small whale beached on the coast of Great St. Thomas. The whale turned out to be a 17 foot long male Cuvier's Beaked Whale. There were no indications as to why it stranded. The whale was towed to the Division by the National Park Service. The head was removed for further study and museum display and the body was disposed of at sea.

This species of whale is relatively common in the Caribbean and is the most frequently stranded whale. This is the seventh whale of this species to strand in the VI in the last thirteen years. Five of these stranded on St. Croix and two on St. Thomas. The only other whale known was a dead sperm whale reported as being consumed by sharks while drifting by south of St. Thomas in March 1993.



## QUOTE

"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has."

Margaret Mead

## St. Croix Sportfish Tournaments

The St. Croix Golden Hook Challenge Fishing Tournament was held on October 21 to 23, 1994. Eighty five anglers participated in this event on 16 boats. Fifty one fish were caught during 416 hours of fishing. In the billfish category, fifteen blue marlin were caught and 14 were hooked but lost. The average estimated weight for all marlin caught was 151 pounds.

In the sportfish category 36 fish were caught: 14 wahoo averaging 26.2 pounds each, 11 dolphin averaging 17.4 pounds each, 2 blackfin tuna averaging 8.7 pounds each, 8 barracuda and 1 skipjack tuna.

## U.S. Coral Reef Initiative (USCRI)

"Coral reefs are a powerful symbol of the economic and ecological significance of coastal ecosystems, of human dependence on these ecosystems, and of the rapid local loss of biodiversity and resources around the world." - USCRI.

Ten percent of the world's coral reefs are estimated to have declined beyond recovery and an additional 30% may be in danger of reaching this state within the next ten years. Recognizing this, the U.S. Dept. of State has led the way in developing the USCRI. The long term vision for the initiative is a global effort to conserve, restore, and effectively manage coral reef ecosystems, including, where appropriate, mangroves and seagrass beds.

The strategy of the initiative is to build on the many existing coral reef research and management activities and programs through collaboration and coordination, and, where appropriate, to develop new activities. The National Oceanic and Atmospheric Administration will be emphasizing the primary areas of research and monitoring, and on improving the health of U.S. coral reef ecosystems through a partnership with U.S. states, territories, and commonwealths. Hopefully, the USVI will benefit from this initiative as our coral reefs are in a serious state of decline and need help.

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GOVERNMENT OF THE VIRGIN ISLANDS  
OF THE UNITED STATES

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## Oil Spill Response

One result of the Exxon Valdez oil spill was the passage of the Oil Pollution Act of 1990. This act requires all oil transporters, refiners and major users of oil to prepare a contingency plan for containing and cleaning up a spill. The EPA, Coast Guard and territorial governments are required to prepare an Area Contingency Plan for the VI. The Division has been working with this group to identify sensitive areas and to develop strategies for dealing with affected wildlife.

The major responsibility for the Division in the event of a spill is the retrieval, rehabilitation and release of oiled wildlife. Two potential problems arose during planning.

The first is retrieval of wildlife. The capture of injured wildlife requires people experienced in handling scared and potentially dangerous animals. Improper handling can result in injuries to people and animals. And because the animal is covered in oil, federal safety standards require handlers to have passed a training course in handling oil. This limits the number of people who can retrieve wildlife.

The second problem is water. Washing requires up to 100 gallons of hot water for a bird. And there could be hundreds of animals requiring washing. The large quantities of fresh water needed for this could be a major problem here in the VI.

The Caribbean Regional Response Team meets regularly to discuss these and other problems. This Team prepares regional and area plans for responding to any potential disaster, including hurricanes, earthquakes and oil spills.

### Note

There is a National Response Center where all reports of oil or chemical spills in the VI should be reported. The number is 1-800-424-8802. Please use it.



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