

# Rose Atoll Wreck

## Rose Atoll Marine National Monument



### Overview

In October 1993, a 137-foot Taiwanese flagged long-line fishing vessel, the *Jin Shiang Fa*, ran aground on the western reef of Rose Atoll. Before coming to rest, the vessel gouged several coral spurs (two 40-meter scars) and broke apart. As a result, the vessel discharged over 100,000 gallons of diesel, 500 gallons of lubricant oil, and 2,500 pounds of ammonia across the reef - the sheen was estimated to cover 11 miles. The crew abandoned ship and was rescued by a nearby fishing vessel. Several weeks later, a Taiwanese salvage tug successfully removed the 65-ton bow section of the vessel, but after running out of funds (paid by the responsible party) they left behind more than 215 tons of debris on the perimeter of the reef and lagoon.

Research dives in 1994 revealed that coralline algae and corals were killed along at least a quarter of the reef rim. Unfortunately, the vessel's impacts on the coral were exacerbated by a massive coral bleaching event that occurred in April of 1994. Scientists from the American Samoa Department of Marine and Wildlife Resources (DMWR) and US Fish and Wildlife Service (USFWS) monitored the ecosystem from 1994-1998. Reports indicated that corals were being harmed by nuisance species of blue-green and red algae that had immediately colonized areas of the reef damaged by the spill, sediment disturbance, and vessel debris, including longline fishing gear. Other affected species included giant clams, sea cucumbers, sea urchins, and fish communities.

Between 1999 and April 2000, an additional 105 tons of remaining metal debris was cut and re-

moved by hand by Moon Divers, a local American Samoa contractor hired by USFWS. An additional 30 tons of debris were removed after being washed ashore following a January 2004 hurricane. All but two tons of debris were removed between August 2004 and June 2005. The final two tons were eventually removed in 2007, nearly 15 years after the initial wreck.



*Jin Shiang Fa on the western reef of Rose Atoll.*  
(Photo: USFWS)

All of the debris collected from 1999-2007 was surface transported and dumped at an US Environmental Protection Agency-approved ocean dumpsite located 3 nautical miles north of Rose Atoll.

### Importance of the Area

Rose Atoll is one of the smallest atolls in world, with 21 acres of emergent land and 1,600 acres of lagoon. The primary reef-building species at the atoll is coralline algae, giving the atoll its rose colored hue. It supports the largest populations of

giant clams, nesting seabirds, sea turtles, and rare species of fish in American Samoa. Endangered humpback whales, pilot whales, dolphins, endangered hawksbill, and threatened green sea turtles have been seen at Rose Atoll. Additionally, 97% of the seabird population of American Samoa resides on Rose Atoll.

Rose Atoll National Wildlife Refuge was established by cooperative agreement between the Government of American Samoa and the USFWS in 1973. In 2009, the refuge and surrounding waters were designated as the Rose Atoll Marine National Monument, managed by the US Department of Interior (DoI), USFWS, and National Oceanic and Atmospheric Administration (NOAA).

### Enforcement Action

The grounding of the vessel was attributed to human negligence, as no one was manning the helm at the time. It was later determined that the ship was carrying whale steaks and it has been hypothesized that the crew might have intended to poach giant clams, sharks, and other wildlife residing in Rose's water. Unfortunately, there was not enough evidence to prosecute the ship owners and crew for these illegal operations.

Under the US Oil Pollution Act and associated Natural Resource Damage Assessment (NERDA) regulations, the owner of the vessel was designated as the responsible party and was charged with removing the wreck from the reef. However, only the hull was removed by the salvage tug operation (paid by a ship owner's insurance company) - 215 tons of debris remained. USFWS was unsuccessful in its attempt to require the owner to remove this debris. The lack of formal diplomatic relations between the US and Taiwan (Republic of China) was a major hurdle that was not overcome.

### Cost to Remove Vessel

The ship's insurance company paid \$1.2 million for the removal of the wreck. Unfortunately, money ran out before they could remove the entire ship and only the hull was removed. The removal of



*Rose Atoll . Red X marks the approximate location of the wreck.  
(Photo: Air Survey Hawaii)*

the remaining debris began in 1999 using emergency funds (\$200,000) provided by the USFWS. \$1.3 million was awarded to USFWS in 2004 by the US Coast Guard using the Oil Spill Liability Trust Fund under the Oil Pollution Act of 1990 (33 U.S.C. 2701-2761). \$200,000 of the \$1.3 million awarded was used to reimburse the USFWS for emergency funds provided in 1999.

### Current Status of Resource

Two submersible dives by the US Fish and Wildlife Service and the University of Hawaii Undersea Research Lab in July 2005 confirmed that the sunken bow was not causing any noticeable ecological damage, and there was no remaining debris along the SW slope at depths from 200-1000 meters.

Following initial monitoring trips to assess all impacted species in 1994-1998 by American Samoa DMWR and USFWS scientists, the monitoring of corals and giant clams continued through 2007. Twenty permanent transects have been set up inside and outside the lagoon. The reefs and lagoon will continue to be monitored on a biennial basis by USFWS through 2015. Over a decade of monitoring indicates that the reefs are now recovering. Reports indicate that 75% of the corals have recovered and invasive algae have decreased by 25%. Giant clams and fish species continue to decline, but scientists believe this is due to poaching rather than to direct impacts from the shipwreck.

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