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News Release

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U.S. Fish and Wildlife Service Takes Extraordinary Conservation Action to Protect Coral Reefs by Removing Nearly One Million Pounds of Shipwrecks

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Honolulu, Hawaii – The U.S. Fish and Wildlife Service has taken an extraordinary conservation action to remove nearly one million pounds of shipwrecks to protect some of the most pristine coral reefs in the world.

Removing the shipwrecks is the first phase of coral reef restoration work at Palmyra Atoll and Kingman Reef National Wildlife Refuges. The two isolated refuges are located 1,000 miles south of Honolulu and are part of the Pacific Remote Islands Marine National Monument.

The iron in the shipwrecks on these remote atolls was fueling the growth of invasive organisms—corallimorph at Palmyra Refuge and a filamentous algae at Kingman Refuge—that smothered a large amount of once-healthy, diverse coral. This is known as “black reef”—a phenomenon in which a reef with high coral diversity transforms into a brown or black reef dominated by a single, invasive species. The next steps in restoring the reef are to halt the progression of black reef by removing the corallimorph and filamentous algae at the wreck sites.

“With this reef restoration project, we are delivering on the conservation promise of these Refuges and the Monument,” explains Susan White, Monument Superintendent and Refuge Project Leader. “Studies showed the proliferation of black reef at the Refuges and linked it to the shipwrecks. As Refuge Managers, we applied those findings in a targeted reef restoration effort involving the removal of the shipwrecks, the removal of invasive species, and the restoration of vital coral reef habitat.”

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To accomplish this complex shipwreck removal project, the Service contracted the marine salvage expertise of Global Diving and Salvage of Seattle, Washington and Curtin Maritime of Long Beach, California, and collaborated with multiple federal partner agencies and The Nature Conservancy. The Nature Conservancy owns the largest island at Palmyra and operates a research station there in conjunction with the Service and the Palmyra Atoll Research Consortium. The Consortium as well as the Washington D.C.-based Marine Conservation Institute and others have long advocated for the removal of the shipwrecks.

With the shipwrecks gone, the otherwise very healthy reefs will have the opportunity to recover from the onslaught of added nutrients and the explosion of invasive corallimorph and filamentous algae.

“Due to their isolation and protected status, the reefs of Palmyra Atoll and Kingman Reef Refuges are healthy and resilient, and experience few manmade stressors besides these wrecks,” explained Palmyra Atoll and Kingman Reef Refuge Manager Amanda Pollock. “By removing the wrecks and invasive species, the Service is giving these reefs the best chance to adapt to global climate and oceanographic changes.”

Throughout the restoration project, scientists and refuge managers will continue to monitor the status and health of the reef ecosystems.

The shipwreck removal project began in early 2013 with pre-planning and design and fabrication of some of the specialized equipment used. Global and Curtin began mobilizing in September 2014 to make the long trip, via Honolulu, to Palmyra Atoll Refuge. Full project implementation occurred for 79 days from November 2013 through January 2014. The tugboat and barges are currently in Honolulu to offload equipment, rest the crew, and resupply before making the crossing to Long Beach, California, where all debris will be offloaded.

The 16-person project team worked on the isolated and remote Palmyra Atoll and Kingman Reef Refuges, undertaking a systematic removal of the shipwrecks from the coral reefs. The project utilized a full range of tools and techniques, from state-of-the-art equipment to sheer brawn and grit, while ensuring protection of the fragile environment throughout removal operations. At Palmyra Atoll Refuge, a 40 x 20-foot floating barge served as the work platform for commercial divers removing the largest and most complex wreck, the 618,350-pound Taiwanese longline fishing vessel *Hui Feng No. 1*. Five divers spent 880 hours cutting up the 121-foot ship with exothermic torches, burning rods, underwater chainsaws, and jackhammers. They also safely removed 605 gallons of fuel products that were discovered in tanks onboard. The crew carefully rigged and hoisted each piece—some weighing in excess of 30,000 pounds—and skillfully loaded them onto awaiting shallow-draft transport vessels. These

shallow-water “scows” carefully carried the loads through shallow coral heads to Palmyra’s deepwater lagoon where a 150-foot crane loaded them onto the barge for transport to California. All debris from the three wrecks will be recycled or properly disposed of in California.

A second shipwreck, a pontoon barge grounded at Palmyra Atoll Refuge since the 1950s, had disintegrated over decades into small shale-like pieces of rust. The most viable option for its removal involved days of back-breaking manual labor for team members as they shoveled 277,800 pounds of debris into buckets and totes.

At Kingman Reef Refuge, team members manually retrieved 44,000 pounds of iron, teak, and fiberglass from an unmarked vessel grounded on the reef since 2007. Working in violent surge and breaking surf, the team used floats to secure heavy iron machinery and carry it off of the reef. Massive 25-foot-long, 10-inch-square timbers that had previously rolled over the reef were floated to a safe area and cut up with chainsaws. Each piece was extricated carefully and hand carried to rafts, then transported by tugboat back to Palmyra to join the wreck pile.

For photos of the reef restoration/shipwreck removal operations:

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For more information on Palmyra Atoll Refuge:

http://www.fws.gov/refuge/palmyra_atoll/
(http://www.fws.gov/refuge/palmyra_atoll/)

For more information on Kingman Reef Refuge:

http://www.fws.gov/refuge/kingman_reef/
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