

For Immediate Release

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Troubled Coral Reefs – A Long History of Decline

NOAA's California Sea Grant Marine Advisor Deborah McArdle is one of 12 coauthors of an article on coral reefs appearing in the Aug. 15 issue of the journal *Science*. The article, "Global Trajectories of the Long-Term Decline of Coral Reef Ecosystems," paints a stark picture of the health of the world's coral reefs. They are headed toward extinction, and without aggressive and swift protection, could be gone within the next few decades.

Based on analyses of historical and archaeological records surrounding 14 major reef areas in the Pacific and Atlantic Oceans and the Red Sea, the scientists report that reef degradation began long ago, perhaps during the hunter-gatherer era of human history, with the removal of large predators and herbivores – sea turtles, large fishes, sharks and seals. By 1900, large animals had been depleted or were already rare at about 80 percent of reefs.

Today, discussions about saving reefs often focus on preventing disease and coral bleaching. The scientists report, however, that if all disease and bleaching were to disappear tomorrow, reef ecosystems would still be in trouble because they are missing top predators and herbivores.

John Pandolfi, a paleobiologist at the National Museum of Natural History, is the lead investigator and first author of the paper. The project is one of many that links overfishing, particularly the removal of larger animals, to the systematic decline of coastal ecosystems worldwide.

California Sea Grant is a statewide, multi-university program of coastal marine research, extension services, and education activities administered by the University of California. It is the largest of 30 Sea Grant programs sponsored by the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.

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