

Professor Tackles Louisiana's Coastal Loss Through Oyster Reef Research

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With the support of the Bywater Institute, Professor Thomas DeCarlo is mapping the oyster reefs that protect Louisiana. His work aids groups like the Coalition to Restore Coastal Louisiana (CRCL), which is manually building oyster reefs to protect shorelines, like this one off Grand Bayou. (Photo courtesy of CRCL)

When Thomas DeCarlo packed his bags to move to New Orleans, he had never set foot in the city. But he was on a mission: protecting Louisiana's rapidly disappearing marshes.

With support from the ByWater Institute's 2025 Faculty Fellowship, he's launching a project to study how restored oyster reefs can safeguard the

state's wetlands.

For a scientist who once chose marine biology simply because it “sounded cool,” the work has become far more urgent.

DeCarlo’s mission became clarified in 2015 when he traveled to Jarvis Island, a tiny, remote U.S. territory in the central Pacific, long celebrated as one of the healthiest coral systems under U.S. jurisdiction. But when DeCarlo and his colleagues entered the water to view the coral, “it was just white everywhere,” he said. Extreme heat had caused almost all the coral to bleach, or turn white in an event that typically leads to the corals dying.

“It was like this spectacularly beautiful dive in a completely remote area, with dolphins around us — and then just total devastation,” he said.

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