

The Great Red Snapper Count

Habitat Classification



This publication describes the habitat classification phase of the Great Red Snapper Count, which is a 2-year research project to estimate the abundance of red snapper in the U.S. Gulf of Mexico.

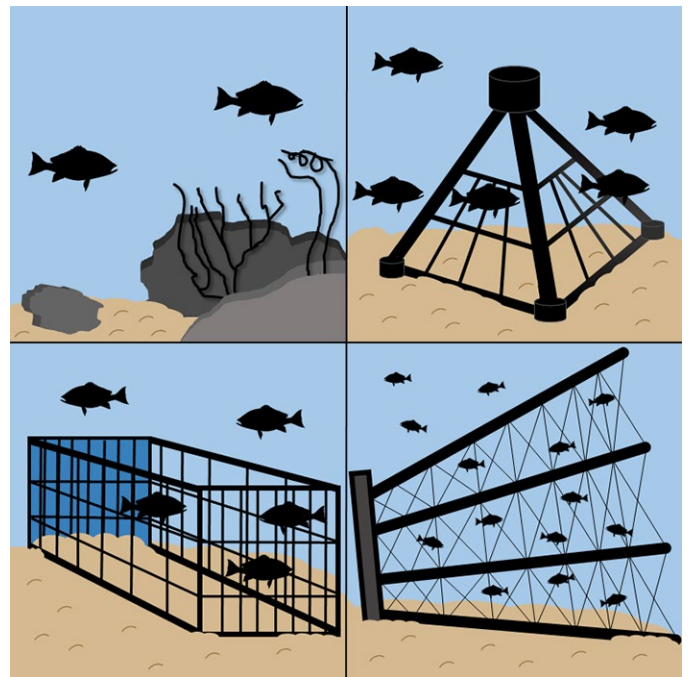
Photo by Trey Spearman, Dauphin Island Sea Lab/University of South Alabama Fisheries Ecology Lab

Where do red snapper live in the U.S. Gulf of Mexico?

- Red snapper are distributed across a variety of habitats.
- The seafloor consists primarily of sand and mud, along with natural reefs; these areas provide habitat for red snapper.
- Concentrated areas of artificial structures also serve as red snapper habitat.
- The coverage of sediments, natural reefs, and artificial structures differs dramatically across the Gulf.

What types of artificial structures exist in the Gulf?

- Large oil and gas platforms are common in the western Gulf.
- Smaller structures (chicken transport cages, pyramids, military tanks, planes, car bodies, and others) are deliberately placed on the sea floor to create fish habitat.



This illustration shows some of the various reef types present in the U.S. Gulf of Mexico (clockwise from top left: natural reef, pyramid, toppled rig, and chicken transport cage). Image by Amanda Jefferson, Mississippi State University Extension Service/Mississippi-Alabama Sea Grant

What is habitat classification?

- Habitat classification is Phase 1 of the Great Red Snapper Count.
- This phase involves determining where each of the various habitat types exist across the Gulf.

How did scientists approach the classification process?

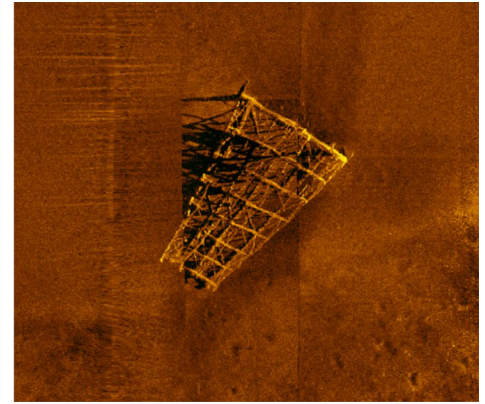
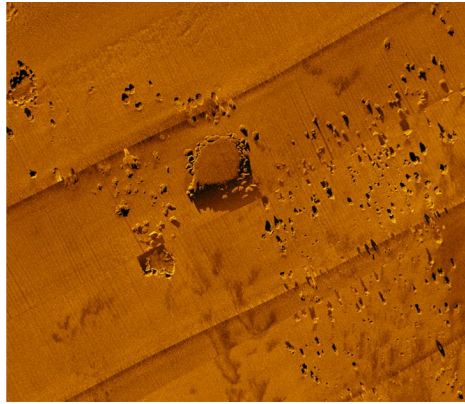
- U.S. Gulf waters were separated into four regions: Texas, Louisiana, Mississippi-Alabama, and Florida.
- Each region was divided into three depth zones, creating 12 unique sections.
- For each section, scientists compiled existing data from various sources to characterize known habitat features.

What did scientists learn from this process?

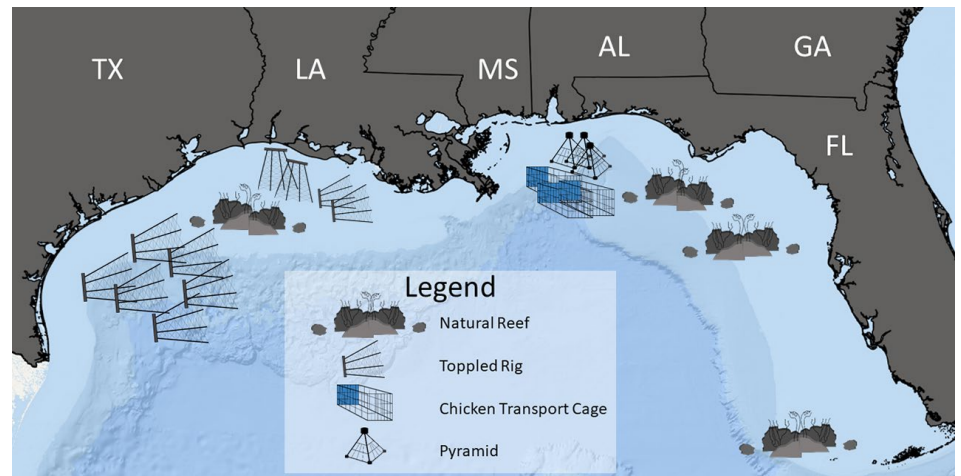
- Scientists calculated the amount of the U.S. Gulf sea floor that is covered by sand, mud, and natural reefs.
- Scientists also determined the quantity of existing artificial reef structures.

Why is this information useful?

- Based on the distribution and number of different habitat types, scientists decided which sampling approaches, or “gear types,” to use in the Great Red Snapper Count.
- This will result in the best possible estimate of red snapper abundance in each section of the U.S. Gulf of Mexico.



These rocky outcrops (left) and a toppled rig were discovered during a side-scan sonar survey. Photos by Dauphin Island Sea Lab/University of South Alabama Fisheries Ecology Lab



This conceptual map shows the general types of habitat present across the U.S. Gulf of Mexico. Map by Amanda Jefferson, Mississippi State University/Mississippi-Alabama Sea Grant

This independent study is being conducted by a leading team of red snapper scientists from across the Gulf of Mexico and beyond:



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