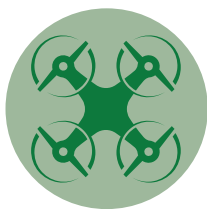


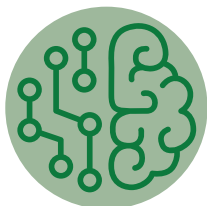


NOAA FISHERIES

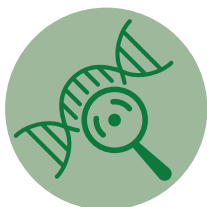
Next generation technologies and techniques:



UNCREWED SYSTEMS



MACHINE LEARNING



GENOMICS

Southeast Surveys

The Southeast Fisheries Science Center conducts surveys in the U.S. Gulf of Mexico, Caribbean Sea, and along the southeastern seaboard. The consistent collection of precise and accurate data over time and across locations allows us to provide the best available science to three regional fishery management councils, two interstate marine fisheries commissions, and the International Commission for the Conservation of Atlantic Tunas. It also helps us protect endangered species such as sperm whales, Rice’s whales, North Atlantic right whales, and leatherback sea turtles. New technologies are being developed to automate many data production processes to improve timeliness, reduce costs, and expand survey coverage.

Healthy ecosystems are critical to tourism, economies, and culture in the Southeast. The data we collect helps us understand the impacts of climate change and blue economy sectors like aquaculture, marine tourism, recreational fisheries, and renewable energy development. We can also analyze the cumulative effects of noise pollution, hurricanes, oil spills, harmful algal blooms, and other stressors.

SURVEYS SUPPORT: NOAA Fisheries research surveys provide data critical to the stewardship of our nation’s ocean resources and their habitat.



NATION'S LARGEST CONCENTRATION OF SALTWATER RECREATIONAL FISHING



163,000 JOBS FROM RECREATIONAL FISHING AND THE SEAFOOD INDUSTRY*



\$1 BILLION IN COMMERCIAL LANDINGS REVENUE*



*Fisheries Economics of the United States, 2019

Protected Species Surveys

Years of data: More than 30 years

Species: Marine mammals, sea turtles, smalltooth sawfish, giant manta ray, oceanic whitetip shark, and corals

What we do: We collect information on population dynamics, genetics, health, ecology, and behavior for several protected species. With our partners, we conduct surveys to develop abundance and distribution models to better understand how protected species use our waters. We monitor and collect gametes from protected corals to cultivate them for research and restoration. We also gather data on prey and environmental factors that may influence protected species distribution and vulnerability to natural and human-caused threats. We use a variety of methods in our protected species

surveys, including dive operations, visual and acoustic observations, uncrewed systems, telemetry, eDNA and biological sampling, and sampling with nets or lines.

Partners: NOAA, state and regional agencies, federal agencies, international institutions, universities, and institutes

Data uses and benefits: These surveys are the main source of data for protected species conservation and recovery efforts in the region. Many protected species are ecosystem sentinels, providing early warning signs of a changing ocean and the resulting impacts on fisheries and other marine uses. The analytical tools, products, and biological samples of these surveys are often shared with research collaborators to aid common conservation goals.

Fish and Invertebrate Surveys

Years of data: Up to 50 years

Frequency: Annually

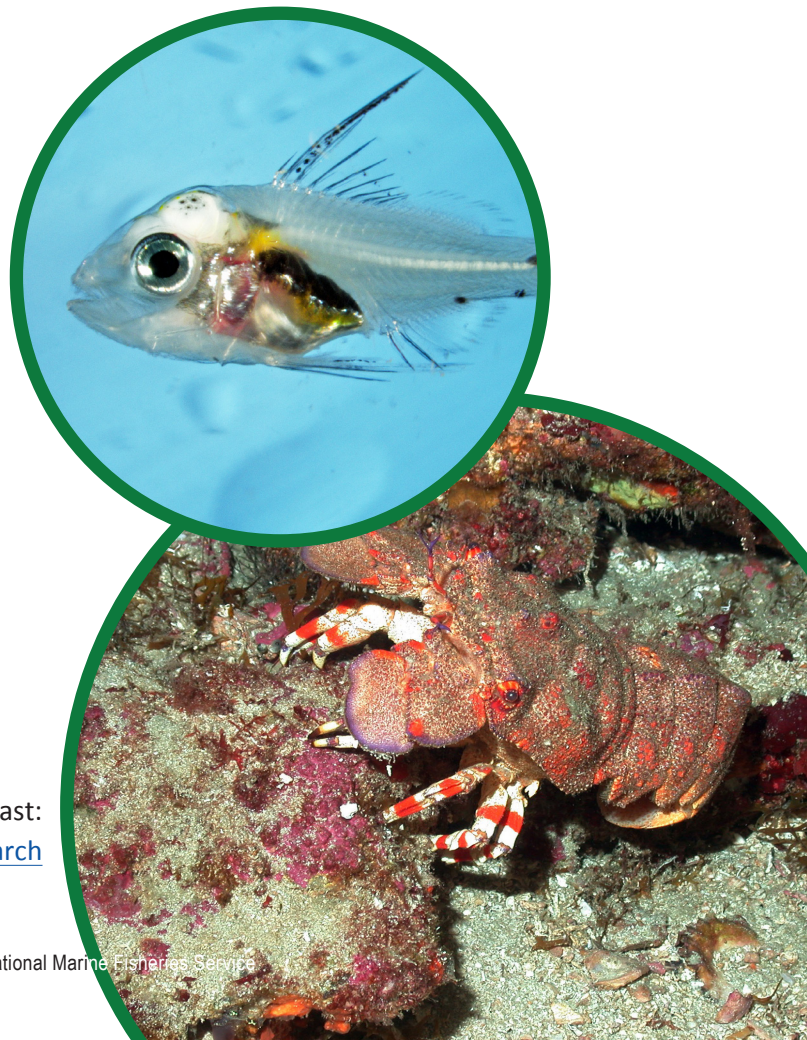
Species: Focal species vary by survey. Species include sharks, snappers, groupers, triggerfish, sea bass, porgies, jacks, tunas, other economically important coastal fish species, and shrimp.

What we do: We conduct a suite of annual ship-based surveys using bottom trawls, traps, bottom longline gear, and video systems. We also conduct a diver-based survey in coral reef habitats. We collect species-specific information on abundance, distribution, size and age composition, and sex ratio, as well as related environmental and habitat information.

Partners: NOAA, state resource management agencies, and academia. We also work with the fishing industry on one of our bottom longline surveys and are developing a paired hook and line and video survey in partnership with the fishing industry.

Data uses and benefits: These surveys have been used to support assessments for approximately 40 stocks in the Gulf of Mexico, Caribbean Sea, and South Atlantic. The data also supports ecosystem-based fisheries management in the region. For example, bottom trawl surveys provide important information on the spatial extent of episodic low-oxygen

“dead zones,” which have significant ecosystem impacts. All of our surveys provide information on the distribution of species, including those that are important to the ecosystem but are not federally managed.



Read about other surveys in the Southeast:

www.fisheries.noaa.gov/southeast-science-surveys-and-research