NOAA FISHERIES

National Systematics Laboratory

The National Systematics Laboratory (NSL) is one of the six research laboratories administered by the Northeast Fisheries Science Center but serves NOAA Fisheries as a whole. NSL's small staff of zoologists, museum specialists, and technicians is located in the National Museum of Natural History at the Smithsonian Institution in Washington, DC, a location connected to the founding of the Fisheries Service in 1871 by the museum's first curator and later Smithsonian Secretary, Spencer Baird. NSL staff work closely with museum colleagues and specimens.

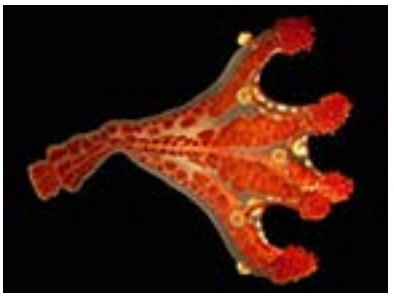
Our Mission

To conduct systematic, taxonomic, and life history research on marine organisms of economic and ecological value, thereby contributing to the understanding of marine biodiversity.

Systematics is the study of life at the level of individual organisms: their genetic relationship to other organisms and how they contribute to ecological diversity. This information provides a basis for understanding the diversity of marine communities and benefits the nation by providing a basis for proper management of our nation's living marine resources.

Our Strengths

- Describing and naming new species; revising existing descriptions, names, and evolutionary relationships of fishes, squids, crustaceans, and corals of economic or ecological importance to the United States.
- Marine biodiversity research
- Worldwide and regional taxonomic monographs that identify, describe, and catalogue the diversity of marine organisms with commercial or ecological importance
- Global taxonomic keys and identification guides
- Staff assist Smithsonian research associates, helping build and curate national collections
- Conduct research for all of NOAA Fisheries
- Expert identifications and species information



Stalked medusa (*Haliclystus californiensis*) is just 2 cm long. Photo by Allen Collins, NOAA

Our Place in the Nation

- **History** - As the first head of the US Fish Commission, precursor to the National Marine Fisheries Service, Spencer Fullerton Baird provided marine specimens for a growing collection at the Smithsonian Institution National Museum of Natural History. After separation from the Smithsonian in 1888, the Fish Commission was independent until 1903, when it was placed in the new Department of Commerce and Labor.
- **Location** - The informal origin of NSL can be traced back to August 1942, when the Bureau of Fisheries fish collection was merged with the National Museum collection. In 1970 NSL took its present name when it was transferred from the Department of the Interior to the National Marine Fisheries Service of the newly created National Oceanic and Atmospheric Administration.
- **Community** – NSL staff have close research collaborations with national and international researchers at academic institutions, state and federal government agencies, and public and private research organizations. They teach university courses and supervise graduate students through adjunct positions; sponsor visiting investigators; and mentor postdoctoral fellows, graduate students, and student interns. They also spend considerable time in education and outreach efforts.

Examining specimens collected on a deep-sea coral cruise. Photo by Geoffrey Shook, NOAA

Spiny deep-sea king crab of the genus Neolithodes. Photo by Michael Vecchione, NOAA

Key Activities and Affiliations

- NOAA's Deep Sea Coral Research and Technology Program
- NOAA's Office of Ocean Exploration
- International Union for the Conservation of Nature (IUCN)
- Census of Marine Life
- Ocean Biogeographic Information System (OBIS)
- Global Biodiversity Information Facility
- Integrated Taxonomic Information System
- Tree of Life Web Project
- Barcode of Life Initiative
- FishBase

Key Collaborations

- Smithsonian Institution
  - Department of Invertebrate Zoology
  - Department of Vertebrate Zoology
  - Division of Fishes
- Virginia Institute of Marine Science
- University of Maryland

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