



**NOAA
FISHERIES**

OVERVIEW: Protected Species Science Branch Assessment and Monitoring Division, NOAA Fisheries Office of Science and Technology



Mirounga angustirostris Credit: Srinivasan, Property of NOAA. Taken under permit.



An Autonomous Underwater Hydrophone (AUH) being deployed. Credit: OAR-PMEL Acoustics Program

PSSB Assessment and Monitoring Division

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Mission Statement

To advocate for protected species science within and outside NOAA Fisheries by investing in research and development efforts and to communicate and coordinate agency science in support of species conservation and recovery.

Branch Description

The Protected Species Science Branch (PSSB) advocates the use of peer-reviewed science to make protected species management decisions.

The PSSB is housed with the Office of Science and Technology's (ST) Assessment and Monitoring Division. We are dedicated to advancing the science on living marine resources and fostering an environment where new ideas develop to realize NOAA's mandates as technologies evolve and new challenges emerge. The Branch functions are principally guided by the ST Director, NOAA Fisheries Chief Science Advisor, Protected Resources (PR) Board, and the Science Board. The core functions of the branch are focused on ocean acoustics, coral recovery, sea turtle and marine mammal assessments, and climate and ecosystem impacts. The issuance of scientific research permits and incidental take authorizations and other management and regulatory actions are exclusively handled by the Office of Protected Resources.

Our overarching objective is to promote scientific excellence and advancement by:

- encouraging internal and external collaboration on research projects;
- facilitating strategic planning;
- identifying and operationalizing best practices, such as developing consistent national guidelines and science criteria;
- operationalizing a fisheries research environmental compliance program,
- enhancing data collection, access and routine management;
- promoting ocean science education and outreach and
- supporting international capacity building in marine science research and conservation.

Protected species includes marine organisms within NOAA Fisheries jurisdiction protected under a variety of US environmental statutes (e.g. Marine Mammal Protection Act, Endangered Species Act, Migratory Bird Treaty Act).

Priorities

The four overarching priorities for the branch are 1) Assessments, 2) Ecosystem Science, 3) Research and Development (R&D), and 4) Science Communication and Coordination.

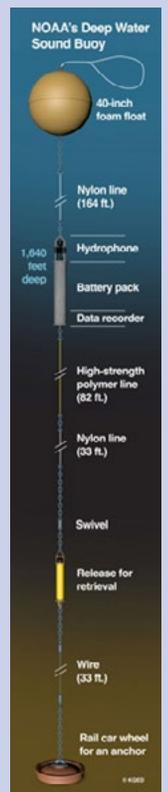
Assessments: Protected species are afforded special conservation status under the Marine Mammal Protection Act, Migratory Bird Treaty Act, and Endangered Species Act (ESA). Protected species by virtue of their distribution, life history, and behavior often overlap with commercial fisheries, coastal development, and energy and defense activities, which are permitted under these and other laws by NOAA Fisheries. Poor and limited scale assessments of protected species can lead to overly restrictive regulations or uncertain decision-making. Conversely, poor or outdated information can put animals at increased risk of extinction. Further, legislative mandates, ESA [status reviews](#) and [recovery plans](#), and [Guidelines for Assessing Marine Mammal Stocks](#) (GAMMS) recommend regular data collection and monitoring of protected species populations within the United States Exclusive Economic Zone (EEZ). Implementing these requirements is, therefore, an important function of the Branch.

Assessments refers to the fundamental study and understanding of protected species behavioral ecology, population abundance, trends, structure, health and condition, and the effects of natural and human stressors on protected species populations within an ecosystem framework.

Ecosystem Science: As critical members of the marine ecosystem, the assessment and conservation of protected species' populations are irrevocably tied to the maintenance of healthy oceans. Further, due to the complex life-histories and depleted populations of many protected species, climate change and ocean noise are expected to act as additional stressors affecting the viability of protected species populations. Seabirds, sea turtles, marine mammals, salmon, and corals, for example, are climate and ecosystem change indicators. Therefore, as NOAA Fisheries continues to move towards an ecosystem management framework, the Branch will continue to advocate for the inclusion and consideration of protected species populations as integral components of ecosystem-based assessments, fisheries bycatch analysis, climate impact studies, and vulnerability assessments.

Science Communication and Coordination: Most protected species are transboundary and highly mobile—so, communication and coordination among local, state, regional, national, and international entities need to occur to help assess and protect these species. Also, the NOAA Fisheries science enterprise is widely spread around the country. The PSSB facilitates communication and collaboration among the Centers and regularly communicates challenges, issues, or promising research from the Centers to the ST Director, NOAA Fisheries Chief Science Advisor, and the Science Board. The Branch plays a central role in bridging gaps between science and management entities, highlighting scientific accomplishments, and encouraging domestic and international research collaboration (e.g., Protected Species Assessment Workshop (PSAW), Protected Species Toolbox Mini-Symposium).

R&D: The Branch periodically monitors protected species population status and trends, and engages in and coordinates diverse R&D activities that will improve information on species abundance, trends, threats, distribution, and recovery. Further, we support comprehensive assessments that include data on life history, behavior, human-caused and natural mortality, stock structure, effects of anthropogenic noise, and climate change impacts as for most species, a lack of understanding of basic biology impedes recovery and prolongs listing. We currently administer two competitive internal funding allocations (IFAs) - Ocean Acoustics and Sea Turtle Assessment. The Ocean Acoustics IFA supports internal NOAA research related to the impacts of noise on marine life and the Sea Turtle Assessment IFA supports internal NOAA Fisheries research related to improving sea turtle population assessments to support species recovery. In addition to these IFAs, from time to time we support short- and long-term funding initiatives to address other critical research priorities that support NOAA Fisheries mandates. Organization of workshops and technical working groups are other ways the branch promotes R&D and scientific exchange.



Credit: OAR-PMEL Acoustics Program

Schematic of a deep water Ocean Noise Reference Station Network mooring.

Other national programs and activities that intersect with PSSB include ST's programs on climate science, scheduling time on NOAA ships, strategic planning, budgeting, ecosystem science, integrated ecosystem assessments, international science programs, habitat science (including the Habitat Focus Areas), fish stock assessments and management, National Seabird Program, National Observer Program and National Bycatch Report, and the Marine Recreational Information Program (MRIP). We also work closely with NOAA's Coral Reef Conservation Program, Office of Habitat Conservation, NOAA International, and several programs within NOAA Fisheries Office of Protected Resources dealing with Marine Mammal Stock Assessments, Marine Mammal Health and Stranding, Permitting and Regulations, and Recovery Plans and Status Reviews. We coordinate with these other programs to advocate for consideration of protected species science needs, ensure alignment with management needs, and to inform them of the agency's protected species science capabilities and accomplishments.

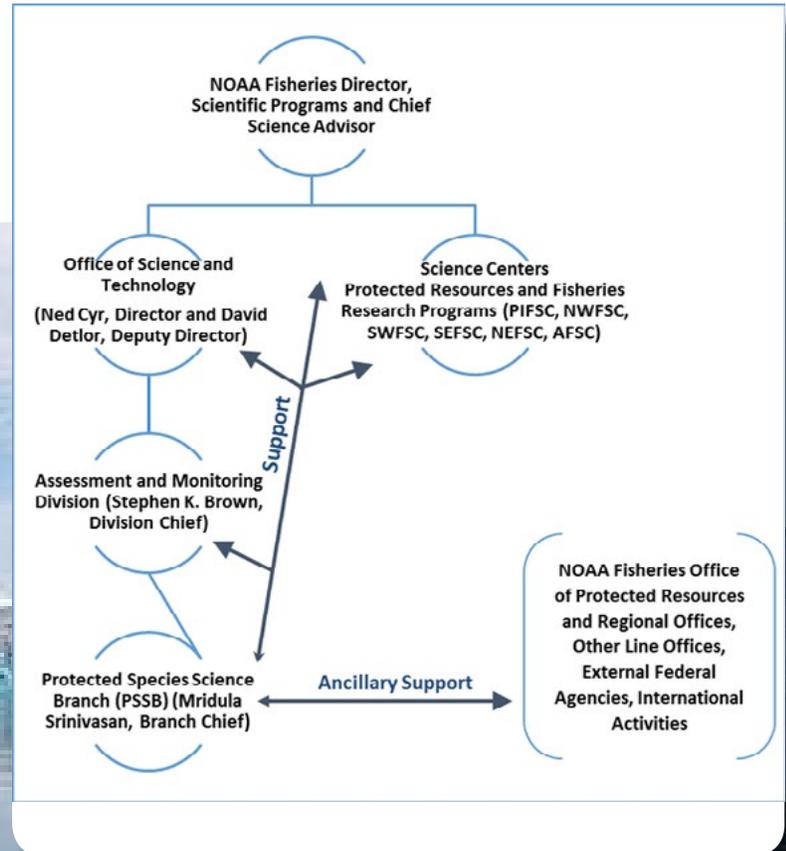
Coral Restoration Credit: NOAA

SUMMARY OF PSSB ACTIVITIES

1. Serve as a primary conduit between Science Center protected species science leads and the PR Board and Headquarters management offices (e.g., international affairs offices in NOAA and in NOAA Fisheries, Office of Protected Resources) and promote collaboration among these offices;
2. Communicate science accomplishments internally and externally;
3. Produce and support the development of new or improved scientific products, databases, and tools that advance the assessment, monitoring, and conservation of protected species;
4. Advocate for the inclusion of key protected species science needs in agency funding initiatives, research plans, and programs;
5. Support the development, review, and dissemination of the Marine Mammal Stock Assessment Reports, as well as guidelines for stock assessment reporting;
6. Provide technical advice and science support to NOAA Fisheries leadership and management offices;
7. Promote capacity building and research collaboration within NOAA Fisheries and with other line offices, as well as with other national and international institutions; and
8. Operationalize compliance of NOAA Fisheries fisheries and ecosystem research with applicable environmental laws (e.g., Animal Welfare Act, Magnuson-Stevens Act, Migratory Bird Treaty Act, Endangered Species Act, Marine Mammal Protection Act, and the National Environmental Policy Act).
9. Oversee national coordination of NMFS Institutional Animal Care and Use Committees (IACUCs)

ORGANIZATIONAL STRUCTURE

The PSSB is one of the two branches in the Assessment and Monitoring Division of the Office of Science and Technology. As a component of the NOAA Fisheries science enterprise, the Branch ultimately reports to the Chief Science Advisor (see diagram below).



Erignathus barbatus. Credit: NOAA



Caretta caretta (Pacific) Credit: Srinivasan. Property of NOAA. Taken under permit.

Personnel	Portfolio
<p>Mridula Srinivasan, Ph.D. (FTE)</p> 	<p>Branch Chief, Marine Mammal Lead</p> <ul style="list-style-type: none"> • PSSB programmatic and administrative functions (e.g., oversee branch activities & staff performance, serve as a member of the PR Board) • Protected species Assessments & Research and Development (R&D) • Budget and research planning • NOAA Fisheries research environmental compliance program • NOAA Fisheries Institutional Animal Care and Use Committees • Informational databases • International, intra- and inter-agency research partnerships/capacity building, education, & outreach • Scientific communications
<p>Jason Gedamke, Ph.D. (FTE)</p> 	<p>Acoustics Lead</p> <ul style="list-style-type: none"> • Oversee Ocean Acoustics Program • Acoustics budget and research planning • Acoustics R&D (including internal funding allocations) • Intra- and inter-agency acoustics coordination • Technical expertise supporting management
<p>Tali Vardi, Ph.D. (Contractor, 0.75 part-time)</p> 	<p>Coral Science Lead</p> <ul style="list-style-type: none"> • Coral Science budget and research planning • HQ liaison for coral science • Informational database support • Coral Science R&D • Coordinate Coral Restoration Consortium • Coordinate National Academy of Sciences Coral Interventions Review • Liaise with the NOAA Coral Reef Conservation Program
<p>Matthew Lettrich (Contractor)</p> 	<p>Climate Science Lead</p> <ul style="list-style-type: none"> • Lead Protected Species Climate Vulnerability Assessments • Marine mammal distributions and climate
<p>Amber Bellamy, Ph.D. (2017 Sea Grant Knauss Fellow)</p> 	<p>Marine Mammal and Sea Turtle Science Coordination and Communication</p> <ul style="list-style-type: none"> • Lead coordinator, National Protected Species Toolbox initiative • Program Manager, Sea Turtle Assessment internal funding allocation • Analysis of protected species science needs • Marine mammal stock assessment data analysis support • Informational databases support • PSCVA technical support • Editor, science newsletter 'Science Connect'
<p>ECO49/AECOM(Consultant)</p>	<p>NEPA/MMPA/ESA Technical Support</p> <ul style="list-style-type: none"> • Technical support for the NOAA Fisheries environmental compliance initiative