

INTRODUCED SPECIES

ACTION PLAN SUMMARY

GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

ISSUE STATEMENT

Introduced species in and around Gulf of the Farallones National Marine Sanctuary (GNFMS) waters threaten ecosystem balance and local marine-based economies. If detection, prevention, and eradication efforts are not taken, further introduction and spread of introduced species will continue in and adjacent to the sanctuary and potentially impact sanctuary resources. Current levels, in terms of abundance and diversity of introduced species are not well documented; nor are the impacts, existing or potential, well understood.

OUR GOAL

To maintain an abundance and diversity of native marine and estuarine species by preventing introduced species, as well as detecting and where feasible, eradicating introduced species in the sanctuary.



Photo: Mud Snail, *Batillaria attramentaria*
NOAA/Department of Commerce

BACKGROUND INFORMATION

GNFMS is close to San Francisco Bay, which is considered the most invaded aquatic ecosystem in the world, with over 255 introduced species. Introduced species in the marine/estuarine environment can alter species composition; threaten the abundance and/or diversity of native marine species; interfere with the ecosystem's function; and disrupt commercial and recreational activities.

Nearshore discharge of ballast water is a common source of introduced species. With over 45,000 commercial cargo ships (6,000 vessels entering or exiting San Francisco Bay per year) transporting 10 billion tons of ballast water around the globe every year, the rate of introduced species will be certain to grow if efforts to prevent introductions do not occur. Introduced species may also be transported on commercial and recreational vessel hulls, rudders, propellers, intake screens, ballast pumps, and sea chests, or can be spread through recreational and research equipment, debris, dredging and drilling equipment, dry docks, and buoys.

The sanctuary's main objectives are to understand the current extent of introduced species in the Gulf of the Farallones, to detect and monitor for new introductions, to eradicate introductions, and to identify and control current and potential pathways to prevent new introductions.

THE JOINT MANAGEMENT PLAN REVIEW (JMPR)

Introduced Species is one of the action plans in the GFNMS Draft Management Plan (DMP). The DMP includes nine action plans that, once finalized, will guide sanctuary management for the next five years. The plan is a revision of the original management plan, developed when the sanctuary was designated in 1981, and is focused on how best to understand and protect the sanctuary's resources. The National Marine Sanctuary Program (NMSPP) is updating the management plans for Cordell Bank, Gulf of the Farallones, and Monterey Bay national marine sanctuaries in what is known as the Joint Management Plan Review.



GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

Designated in 1981, Gulf of the Farallones National Marine Sanctuary spans 1,279-square-miles (966 square nautical miles) just north and west of San Francisco Bay, and protects open ocean, near-shore tidal flats, rocky intertidal areas, wetlands, subtidal reefs, and coastal beaches within its boundaries.

Food-rich sanctuary waters teem with life: fish, invertebrates, seabirds and marine mammals thrive here. The sanctuary contains thirty-six marine mammal species, as well as twenty-six federally listed endangered or threatened species. White sharks and endangered blue and humpback whales migrate here seasonally to feed, and the Farallon Islands host the largest concentration of breeding seabirds in the contiguous United States.



ACTION PLAN

The sanctuary's Introduced Species Action Plan was developed jointly with a variety of stakeholders and partners and includes, but is not limited to, the following components:

- Develop a native and introduced species inventory and database specifically for GFNMS and areas adjacent to the sanctuary.
- In coordination with existing monitoring programs, develop a program to detect introduced species in estuarine environments of the sanctuary.
- Develop a monitoring program to detect and monitor introduced species in the rocky intertidal areas and the pelagic environment of the sanctuary.
- Develop a volunteer-based outreach and monitoring program to improve early detection of introduced species.
- Develop partnerships with other agencies and organizations that are involved in issues related to introduced species and engage them in advising the sanctuary.
- Develop a rapid response plan and streamlined permit process in order to respond in a timely manner to necessary eradication or control efforts in the sanctuary.
- Take action to control new introductions.
- Through outreach efforts, inform targeted audiences and industry about pathways through which introduced species may enter the sanctuary and educate those targeted audiences on prevention methods.

TO GET INVOLVED

GFNMS welcomes your ideas about important resource management issues in the sanctuary. A Draft Management Plan and Draft Environmental Impact Statement are scheduled for release to the public in 2006. Following their release, hearings will be held in several locations throughout the region to gather public comment. Written comments will be accepted as well. To find out about public hearings, or how to submit written comments, please visit our website at <http://sanctuaries.noaa.gov/jointplan>.