

POINT REYES • FARALLON ISLANDS NATIONAL MARINE SANCTUARY

Marine Sanctuary Protects a Dynamic Ecosystem

The waters of the Point Reyes-Farallon Islands National Marine Sanctuary support a productive ecosystem composed of many interrelated habitats and a variety of sea life.

The continental shelf and its associated shallow waters are wider here than at any other place along the California coast. These waters are rich in nutrients and promote thriving concentrations of marine life at all levels of the food web, from microscopic plankton to killer whales.

The region's rich fishery resources include salmon, abalone, rockfish, clams and herring. Fish are an important food source for the area's marine mammals and sea birds, and support extensive commercial and recreational fishing industries.

Variety of Rich Habitats

The Sanctuary contains numerous habitat types, all of which contribute to the richness and beauty of the area:

—Tidal salt marshes and bays are nesting areas for several species of coastal birds and are vital for the spawning of many fish that later migrate to the sea.

—Rocky shores and beaches provide resting and breeding sites for thousands of seals and sea lions.

—Offshore kelp beds offer food and shelter for a wide assortment of organisms including sea urchins, small crabs, kelp bass and rockfish.

—Deep water in the Gulf of the Farallones is more oceanic in character. Of the many species of

whales, dolphins and porpoises that occur here, the California gray whale is most often seen by the public.

Gray Whale Migration

The gray whales' yearly journey between their arctic feeding grounds, and breeding and calving sites in Baja California lasts from December to June. The whales travel close to shore in their lengthy southward trek and can be easily seen from the Point Reyes headlands and other vantage points.

Gray whales make the 12,000 mile round trip from the Bering Sea to Mexico nourished by their extensive body fat. During summers in the Bering Sea these magnificent creatures, that sometimes reach 50 feet in length, primarily eat small crustaceans and mollusks.

The **salt marshes** in the extremities of Bolinas Lagoon and Drakes Bay are primarily tidal but are also fed by fresh-water streams and rain run-off. Clams and crabs are abundant, providing food for a variety of creatures such as raccoons and shorebirds. Scoters, scaup and other birds that nest on the Arctic tundra, winter in the bays and lagoons adjacent to the salt marshes.

The **spray-swept headlands** and sea cliffs of the Sanctuary are both feeding and nesting areas. Many seabirds and marine mammals nest and breed mainly on islands, making the Farallons extremely vital in the preservation of species such as the northern elephant seal and the ashly storm-petrel.

The **tidelands** are important feeding grounds for a large number of marine and land animals. On the beach, a variety of birds hunt sea life exposed at low tide. Scavengers feed on dead plants and animals washed ashore.

Beyond the tidelands is the **open ocean**. These relatively deep but well-lit, rich waters are feeding grounds for cormorants, gulls, petrels, fish and plankton-eating whales.

Bodega Head

CALIFORNIA

Tomales Bay

Point Reyes

Drakes Estero

Rocky Point

Pacific Ocean

North Farallon

FARALLON ISLANDS

Middle Farallon

Southeast Farallon

Seals and Sea Lions Startle Easily

These graceful swimmers are present throughout the year on both the mainland and the Farallon Islands. The noisy barking and playful behavior of the sea lions make them among the most popular of marine mammals.

Although captive animals become accustomed to people, this is not so in the wild. Adequate care should be taken to maintain a safe distance for both the viewers' and the animals' protection. For example, harbor seals are easily disturbed and will startle if approached closer than 200 yards. This sometimes causes females to become separated from or to abandon their pups.

The northern elephant seal, which may reach 20 feet in length and weigh 4 tons, is the largest pinniped. The elephant seal, named for the males' large, fleshy nose, was nearly exterminated by commercial hunters in the mid-19th century. As a result of improved protection and

management, the population level has risen and the species is reestablishing itself over its former range. Breeding has resumed on Southeast Farallon Island; pups have been born there since 1972.

More recently, small numbers of elephant seals have been sighted on isolated beaches of Point Reyes National Seashore. Scientists expect that within several years breeding and pupping will commence on the Point Reyes mainland.

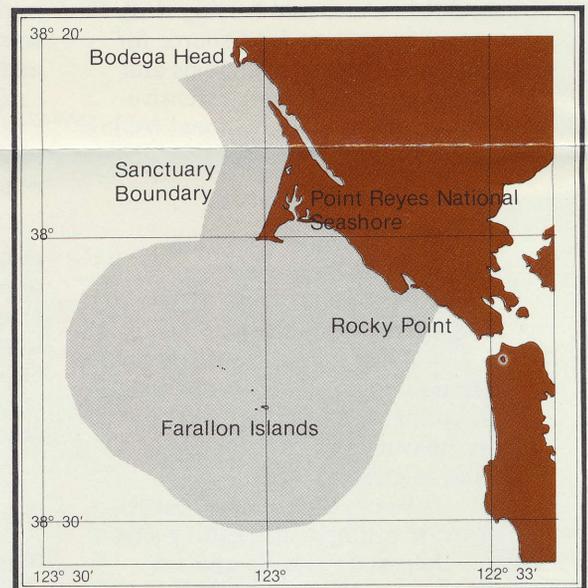
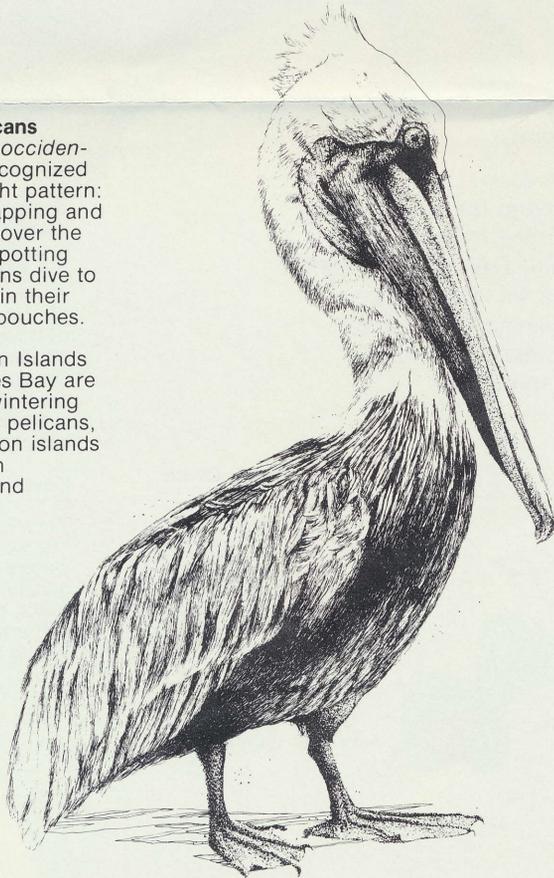
300,000 Seabirds Breed on Farallons

The most visible of the Sanctuary's inhabitants are its seabirds. The Farallon Islands contain the largest seabird colony in the continental United States— 12 species totalling over 300,000 birds. Gulls, petrels and murrelets fill the air with their cries as they forage over the waters of the Sanctuary.

Brown pelicans

(*Pelecanus occidentalis*) are recognized by their flight pattern: alternate flapping and gliding low over the water. On spotting prey, pelicans dive to snatch fish in their expanding pouches.

The Farallon Islands and Tomales Bay are important wintering grounds for pelicans, which nest on islands off southern California and Mexico.



The Point Reyes-Farallon Islands National Marine Sanctuary (shaded area) covers waters adjacent to the coast between Bodega Head, Rocky Point (south of Stinson Beach) and the Farallon Islands. It encompasses approximately 948 square nautical miles. The coastal boundary follows the mean high tide line and seaward limit of Point Reyes National Seashore. From Bodega Head to the Point Reyes headlands it extends 6 nmi. off shore. The Sanctuary includes the waters within 12 nmi. of the Farallon Islands and Noonday Rock as well as the area between the Islands and the mainland from the Point Reyes headlands to Rocky Point. It also embraces Bodega, Tomales and Bolinas Bays, and Bolinas Lagoon. (One nautical mile equals approximately 1.15 statute miles.)

Endangered species such as the brown pelican and peregrine falcon are found there. Many species of waterfowl and shorebirds frequent the area, which lies along the migratory flyway between the Arctic and Central and South America.

Sanctuary Managed for All to Enjoy

The sense of wonder and majesty that this area brings to people does not diminish with time. Its esthetic and recreational pleasures are experiences to be enjoyed and remembered by all who come to the Sanctuary.

The Point Reyes-Farallon Islands National Marine Sanctuary was established to protect an important part of our nation's marine resources. The Sanctuary, Point Reyes National Seashore and Farallon National Wildlife Refuge are all crucial elements in our national ecological heritage

Steller sea lions

(*Eumetopias jubatus*) were first described in 1741 by Wilhelm Steller, who called them "lions" because of their bellowing roar and leonine eyes. Weighing up to 2200 pounds, these large mammals are sometimes seen "hauled out" on rocky shores in good weather. Within fifteen miles of shore they hunt for fish, squid and crabs. Steller sea lions are declining in California waters. The reasons are unknown, although

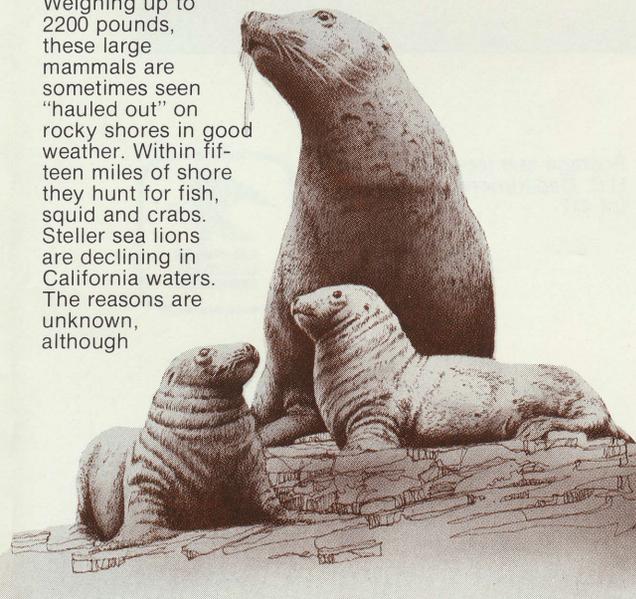
disease and virus have been implicated in contributing to premature births.

The tufted puffin

(*Lunda cirrhata*) is a seabird 14½-15½ in. in height, often seen sitting upright on a sea cliff. They nest among the rock crevices, laying one egg and raising the chick on fish brought in from the sea.

and serve as examples of humanity's continuing concern for the marine environment.

The National Oceanic and Atmospheric Administration manages the Point Reyes-Farallon Islands National Marine Sanctuary through its Sanctuary Programs Division. The marine sanctuary program emphasizes the protection of special marine areas for the long-term benefit and enjoyment of the public. Research and educational programs are underway to improve our understanding and appreciation of the area's resources and to promote their wise use.





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