National Park Service
U.S. Department of the Interior
Pacific Coast Science and Learning Center
Research Project Summary June 2008

The Common Murre Restoration Project

Gerry McChesney and Peter Kappes, U.S. Fish and Wildlife Service

The Common Murre (*Uria aalge*) is the most abundant seabird found nesting along the central California coast. There are several mainland and nearshore murre colonies in this region, as well as the large offshore colonies found on the North and South Farallon Islands.

Murres spend much of their lives resting on the water or diving in search of food. These life history characteristics make them particularly susceptible to entanglement in fishing gear and to becoming fouled during oil spills. During the mid-1980s, the central California murre population experienced a dramatic decline. This was the result of birds becoming entangled in gill nets that were set as part of the Halibut, Starry Flounder, and White Croaker fisheries as well as several oil spills that occurred along the central coast, in particular the 1986 *Apex Houston* spill. This spill, which killed about 9,900 Common Murres and other seabirds, resulted in the extirpation of a small colony of 3,000 murres that nested on a sea stack in northern San Mateo County, called Devil's Slide Rock. In an effort to stop and reverse this decline, restrictions to the gill net fishery were enacted and the parties responsible for the *Apex Houston* oil spill agreed to a settlement that included funding the restoration of the Devil's Slide Rock and other murre colonies in the region. Subsequently, the 1998 T/V *Command* oil spill killed about 1,490 murres and other seabirds. A damage assessment from that spill is also contributing funds toward the restoration of murre colonies in central California.

U.S. Fish and Wildlife Service

The Common Murre

The Project: *The Common Murre Restoration Project is a cooperative effort involving U.S. Fish and Wildlife Service and other organizations. The primary goal of this project is to restore the Common Murre colony at Devil's Slide Rock as well as enhancing populations of other central California murre and seabird colonies by identifying and reducing threats.*

Between 1996 and 2005, project biologists used social attraction methods including decoys, sound systems, and mirrors to encourage murres to re-colonize Devil's Slide Rock. To determine the effectiveness of the social attraction techniques and to assess other restoration needs, other nearshore murre colonies have also been monitored. In Point Reyes National Seashore, intensive monitoring has been conducted at Point Reyes Headlands with additional monitoring at colonies in Drakes Bay, including Point Resistance, Millers Point Rocks, and Double Point Rocks (Stormy Stack). In addition, the Castle/Hurricane Colony Complex in Monterey County has also been studied.

U.S. Fish and Wildlife Service

Lighthouse Rock at the Point Reyes Headlands

Project biologists use a combination of traditional methods and new technologies to monitor the murres and other seabirds. In traditional land-based monitoring, biologists use high powered spotting scopes and binoculars to determine daily and seasonal attendance patterns, record productivity, and census a variety of seabirds in addition to murres, including Brandt's (*Phalacrocorax penicillatus*) and Pelagic (*P. pelagicus*) Cormorants, Western Gulls (*Larus occidentalis*), Black Oystercatchers (*Haematopus bachmani*), and Pigeon Guillemots (*Cepphus columba*). At Devil's Slide Rock, remote-controlled video cameras were mounted within the colony in 2005–07 to assist with monitoring and conduct additional studies. When operational, video was streamed live to the Internet and now recordings of this footage can be viewed through a link on the Common Murre Restoration Project website.

Project biologists also survey disturbances to murres and other seabirds. Disturbance events are divided into two general categories: anthropogenic (human-caused) and non-anthropogenic. These are further divided into sub-categories such as airplanes, helicopters, boats, kayaks, or humans on foot for anthropogenic disturbances and ravens, pelicans, gulls, or sea lions for non-anthropogenic disturbances. When a disturbance is observed project biologists record relevant data about the location, identifying names or numbers of aircraft or boats, approach distance, numbers of birds disturbed, and obvious impacts (e.g., eggs or chicks lost, birds did not return, etc.). This information is essential for resource managers to make informed decisions about how best to manage sensitive seabird habitat in order to reduce disturbance events that may negatively impact seabird populations.

In addition to the land based monitoring, project biologists also conduct aerial surveys of all of the seabird colonies along the California coast. These surveys are part of a long-term monitoring effort that looks at trends in seabird populations over time, and can be used as a warning signal if populations decline rapidly or decline for unnatural reasons, and are very useful for measuring the success of restoration efforts.

The Results: *The central California Common murre population is recovering from the large declines of the 1980s, with almost all breeding colonies growing each year since the year 2000. Attendance at all colonies continues to be high despite two to three years of low productivity in 2005–2007.*

The restoration work at Devil's Slide Rock has been very successful. Breeding occurred the first season that social attraction equipment was installed and the number of breeding pairs has increased with each year. The population of Common Murres at Point Reyes (Figure 1) has steadily increased for twenty years, after the low in 1986. The population exceeded the 1979 counts in 2006 when it reached almost 37,000 birds. In 2006, the social attraction work was discontinued because of the high colony growth and to provide more nesting habitat. In 2007, almost 400 murre pairs bred on Devil's Slide Rock, the highest number recorded since the inception of the project in 1996.

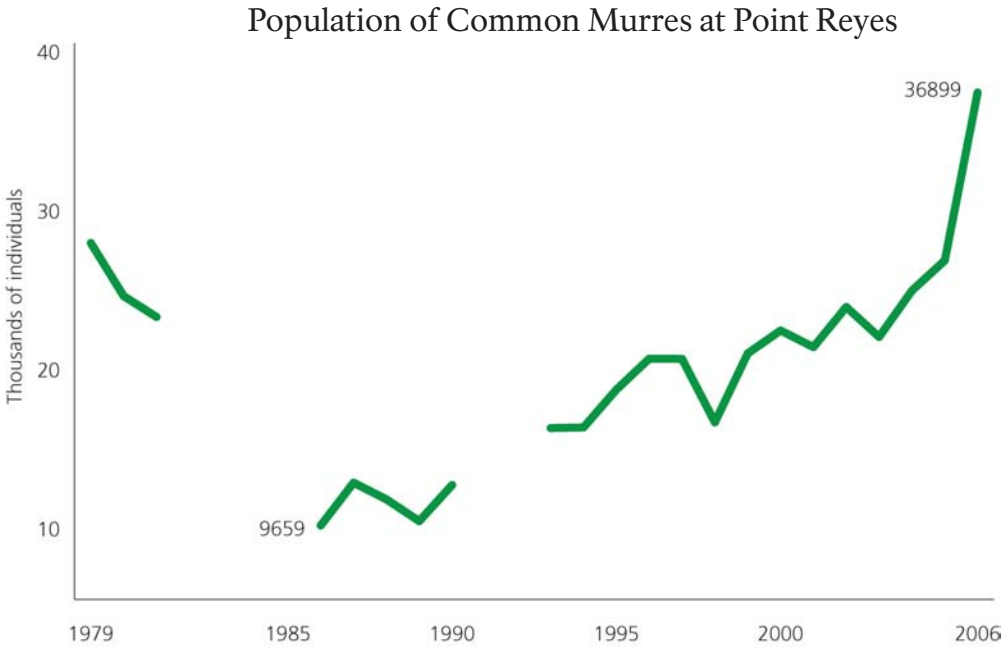

Figure 1. Common Murre Populations at Point Reyes, excluding the years that data was not collected (1982–1985, 1991–1992)

The relative rate of close approaches to colonies by aircraft and boats has increased in recent years at both Devil's Slide Rock and Point Reyes Headlands. This is of concern because disturbances can cause impacts to breeding colonies, including reductions in reproductive rates and even site abandonment. Surveillance of disturbance monitoring will continue to be a central focus of the project. In addition, inter-agency education efforts are being implemented to decrease disturbances and potential human-seabird interactions.

Additional Information:

Gerry McChesney gerry_mcchesney@fws.gov
Peter Kappes peter_kappes@fws.gov
http://www.fws.gov/SFBAYREFUGES/MURRE/murrehome.html