

## Successful Island Mouse Eradication Techniques

Land managers have successfully eradicated house mice from more than 20 islands worldwide.

The only eradication technique that managers have implemented successfully is the distribution of bait containing a rodenticide into every potential mouse territory on the island.

All of the baits that Refuge managers are considering have been specially formulated and tested for use in conservation projects. The baits contain the minimum effective concentration of rodenticide (measured in tens of parts per million).



*Egg collectors, circa 1860s*

### History of House Mice on the Farallons

House mice were introduced to the South Farallon Islands, probably accidentally, by human visitors prior to the U.S. Fish & Wildlife's acquisition of the islands in 1969. Among these early visitors were the U.S. military, lighthouse keepers, seal hunters who used the islands as a base camp for harvesting fur seals, and egg collectors who gathered thousands of eggs from dense murre colonies. Fur seals and murre have recovered significantly from the exploitation that occurred in the 19<sup>th</sup> century. The house mice remain, however, as a damaging legacy of earlier island users.

We want to hear from you! The US Fish & Wildlife Service is establishing a formal public comment period for this project from April 14 through May 29, 2006. Please address your comments to Jesse Irwin or Joelle Buffa: (510) 792-0222; [sfbaynwrc@fws.gov](mailto:sfbaynwrc@fws.gov); PO Box 524, Newark CA 94560; (510) 792-5828 fax

## Restoration of the South Farallon Islands: House Mouse Eradication



US Fish & Wildlife Service  
Farallon National Wildlife Refuge



*Ashy storm-petrel chick*

### Ashy Storm-petrel Decline

The ashy storm-petrel is a small, gray nocturnal seabird. Its breeding range is limited to rocks and small islands off the coast of California, southern Oregon, and northern Baja California. Some experts estimate that there are only about 7,000 ashy storm-petrels; more than half of the breeding population nests at the Farallons.

The number of breeding ashy storm-petrels on the Farallons declined over 40% in a recent 20-year period. Biologists now believe that a major cause of this decline has been predation by burrowing owls, which are supported prior to the ashy storm-petrel breeding season by eating house mice.

The petrels' ongoing decline, their small habitat range and their naturally slow reproduction rate indicate that, unless predation is reduced, they run a very high risk of becoming extinct. The U.S. Fish & Wildlife Service has identified the ashy storm-petrel as a Species of Conservation Concern.



*Ashy storm-petrel remains beneath a burrowing owl roost*

### Negative Impacts of House Mice

House mice are negatively affecting the breeding population of the ashy storm-petrel both through direct predation and by supporting a population of predatory burrowing owls.

These owls, juvenile birds that land on the Farallons accidentally during their fall migration, arrive during the mouse population's seasonal peak. The mice are a plentiful food source for these owls during the fall season, but by winter the mouse population plummets according to its predictable annual cycle. Left without a reliable food source, the owls are forced to prey instead on ashy storm-petrels, which begin arriving in late winter for the spring breeding season.

### Anticipated Benefits of Removing House Mice

If house mice are eliminated from the Farallons, burrowing owls arriving there will disperse from the island after a few days like the many other errant migrating landbirds that arrive each fall. With owls absent from the islands during the spring breeding season, the ashy storm-petrel population will have a much better chance of recovering.

Eradicating house mice will also benefit the islands' plants, invertebrates, and salamanders. Researchers on other islands have documented significant increases in the numbers of invertebrates and herptiles (lizards and amphibians) after mouse eradication.



*Farallon arboreal salamander*