

Restoring the Farallon Islands Ecosystem by Invasive Rodent

House Mouse Removal

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Removal of invasive species from islands has become an increasingly successful and important conservation tool for restoring island ecosystems. The Farallon Islands, which lie 28km west of San Francisco, are the site of a U.S. Fish and Wildlife Service (USFWS) proposal to restore seabirds and endemic species by removing invasive House mice (*Mus musculus*). The Farallon National Wildlife Refuge harbors over 300,000 breeding seabirds, and is the largest seabird colony in the contiguous U.S. seabird colony outside of Alaska and Hawaii. Yet non-native mice are having serious negative impacts on native island resources, threatening species like the endangered rare Ashy Storm-petrel (*Oceanodroma homochroa*). About 50% of the world population of this species breeds on the Farallones, and their population has declined in recent decades whose population has undergone a 40% decline. Recent mark-recapture studies indicate that mice infest the Farallones at plague-like densities of 1300 mice/hectare, one of the highest densities ever reported for the species. A rodent removal mouse eradication operation is proposed using eradication tools designed specifically for island conservation using Removal techniques that will be uniquely tailored to these islands, and will be based on island studies and other research that have been conducted for over ten years to help fill important data gaps. Rodents have been successfully removed from over 338 other islands worldwide including on Anacapa and on USFWS Refuges in Alaska, Palmyra Atoll and Desecheo (Puerto Rico). The Farallon Restoration Project intends to permanently restore the Farallon ecosystem by eradicating invasive mice while avoiding and minimizing non-target impacts by utilizing ten years of consultation, research and careful planning.

TOPIC AREAS: Environmental planning, Restoration Ecology, Marine ecosystems, Alien and invasive species, Climate change, Conservation in hotspots, Conservation GIS, Ecological restoration and recovery of endangered species, Island restoration, Ecosystem/conservation area management, Scientists and managers: bridging the gap.

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Commented [MG1]: Would help to cite how many mouse eradication have occurred. This is more specific to this project and shows part of the challenge (not many have been done). This is part of what makes this project somewhat unique and thus a more interesting talk for this venue.

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