### How can I help?

There are a number of ways you can help:

- Keep pets at home when visiting the reserve
- Stay on the trail
- Keep motorized vehicles out of the reserve
- Pack all trash out
- Respect cultural sites
- Volunteer on service projects for trail maintenance and weed pulling
- Give us your input and ideas about a predatorproof fence to kaenapoint@yahoo.com



Black-footed Albatross and Red-tailed Tropicbirds are two species that could return to Ka`ena



For more information on this project please e-mail:

kaenapoint@yahoo.com

#### Or Write:

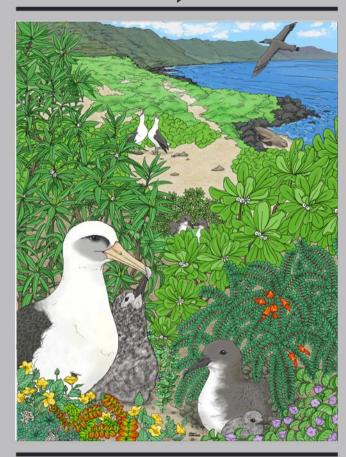
DLNR Natural Area Reserves System 1151 Punchbowl St Honolulu, HI, 96813

Cover Drawing: Naomi Swenson

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# KA`ENA POINT Natural Area Reserve

# Ecosystem Restoration Project

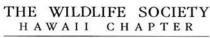


# DIVISION OF FORESTRY AND WILDLIFE

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U.S. Fish and Wildlife Service Pacific Islands Field Office Honolulu, Hawai'i



# Forever Ka'ena

Ka`ena Point is located at the very northwest tip of the island of O`ahu. It is about 10 miles west of Waialua on the North Shore and 10 miles north of Wai`anae on the leeward coast. Within this area is the 59-acre Ka`ena Point Natural Area Reserve, owned and managed by the Hawai`i Department of Land and Natural Resources.



Ka`ena Point Natural Area Reserve as seen from above



Island of O`ahu, Hawai`i

#### A cultural resource

People have been a part of Ka`ena Point for generations. Many trace their ancestors to this special place. Within the reserve is leina a ka`uhane (Spirit Leap), which is considered to be a wahi pana, a celebrated legendary place. Early Hawaiians used Ka`ena Point for fishing and feather collecting. Today, people of various cultures visit Ka`ena Point for fishing, hiking, bicycling, and other recreational and educational activities.



#### The wildlife of Ka ena

Ka`ena Point is an excellent example of the type of ecosystem that can be found in Northwestern Hawaiian Islands. The difference is that anyone on O`ahu can drive to Ka`ena Point to see this spectacular display of plants and animals.



- It is home to nesting seabirds, monk seals, and other native coastal species.
- One of the largest seabird colonies in the eight main Hawaiian Islands is found here. Recent surveys have estimated approximately 2,000 seabirds use Ka`ena Point as their breeding grounds, and many more than that use the area as a place of refuge.
- With adequate protection, it has the potential to become a safe haven for many more species of Hawai`i's seabirds, plants, and insects that cannot survive elsewhere.



# Threats to wildlife at Ka'ena

What is threatening the wildlife at Ka`ena?

Rats and Mice: Observations from Hawai'i and around the world have shown that rats will eat seabird eggs and chicks, and even attack adult birds. Scientists estimate that rats have caused 40-60% of all bird and reptile extinctions on islands worldwide. Rats and mice also eat native plants and seeds.





andalwood seeds eaten by Shearwater chick killed

Rodents at Ka`ena Point

Mongoose, Cats, and Dogs: At Ka ena Point in 2006 15% of Wedge-Tailed Shearwater chicks were killed by these predators, and in 2007 13% of Lavsan Albatross chicks were also killed. These birds nest on the ground and are extremely vulnerable, especially if they cannot yet fly.



Over 100 Wedge-tailed Shearwaters killed by dogs and cats in 2006 at Ka'ena Point

Despite intensive efforts to control predators such as rats, mice, mongoose and others they continue to threaten nesting seabird populations. Without our help, seabird and native plant communities at Ka`ena Point will continue to be attacked by these alien predators.

# Plants and Animals of Ka'ena

# Nesting seabird species:

Lavsan Albatross (Moli)

Wedge-Tailed Shearwater (`Ua `u kani)

White Tailed Tropicbird (Koa'e 'ula)

Hawaiian Short-eared Owl (Pueo)



## Other seabirds observed:

Black-footed Albatross

Great Frigatebird (`Iwa)

Red-footed, Brown and Masked Boobies (`A)

Red-tailed Tropicbird (Koa `e`ula)

Grey-backed (Pakalakala), Sooty (`Ewa `ewa) and White Terns (Manu-o-kū)

Black Noddy (Noio)



# Migratory shorebirds:

Wandering Tattler (`Ulili)

Ruddy Turnstone (`Akekeke)

Pacific Golden Plover (Kōlea)

#### Other animals:

Hawaiian Monk Seal `Īlioholokiauaua)



#### **Native Plants**

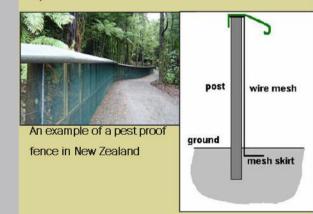
Many coastal plants such as naupaka, `ilima & naio Eleven federally endangered species such as `ohai and `akoko (a species found only at Ka`ena Point)

# Is there a solution to predation?

## Ecosystem restoration through fencing

The goal of ecosystem restoration is to provide a safe place for Hawai`i's native seabirds, plants. and insects by removing destructive alien species and allowing the native species to rebound. New technology in pest-proof fencing holds promise. A pest proof fence could effectively keep out all kinds of mammalian pests-from large animals such as pigs and dogs, to small animals such as mongoose and rats.

A fence with a combination of features-built approximately 6.5 feet high with a rolled hood at the top, fine mesh between the fence posts, and a skirt buried underground -- prevents animals from jumping, climbing, squeezing through or digging their way around the fence and into the protected area. This type of pest proof fence was developed in New Zealand and has been used very successfully.



If this method were used, there would be two steps: first fence construction followed by predator removal. Compared to the current cost of protecting native seabirds and plants from alien species at Ka`ena Point, a fence would start to save money by eliminating the need to constantly remove alien species.

If constructed, this will be the first pest proof fence not only in Hawai i, but in the United States. It would be a great example of the people of Hawai'i showing leadership in protecting and restoring their unique natural resources.

# How could the project affect me?

#### How would a fence affect

#### Access?

People would still be allowed to visit the reserve both during and after construction. There would be unlocked gates that would allow people on foot and on mountain bikes to enter the reserve at the existing entrances on both the North Shore and West side.

#### Views?

The fence would run along the base of the Wai anae Mountains following the existing upper roadbed. It would come down to the high tide line at either end where the existing entrances to the Natural Area Reserve are, but will not fully encircle the reserve. The fence would be designed to blend into the hillside.



What a pest proof fence may look like at Ka'ena

#### The future of Ka ena Point?

By removing alien species from Ka`ena Point, two main things would happen.

- existing populations of seabirds and native plants would increase.
- species that could use the Ka`ena Point ecosystem, but were unable to when predators were present, would start to return, or would be transplanted there.

As a result, larger populations, and more types of plants and wildlife would be found within the reserve. By removing alien species from Ka`ena Point we have the opportunity to restore this rare ecosystem to its natural state and preserve a precious piece of Hawai i for future generations.