

# E Mālama Nā Manu Kai O Hawai'i Nei Care For The Seabirds Of Hawai'i Nei



Conservation Council for Hawai'i and its Poster Partners are pleased to produce this year's annual wildlife poster celebrating the seabirds of Hawai'i. The original artwork for the poster was created by wildlife biologist and artist Patrick Ching ([www.patrickchingart.com](http://www.patrickchingart.com)). The text was written by Joan Conrow with input from Carl Berg, Hawaiian Wildlife Tours; Beth Flint, U.S. Fish and Wildlife Service; Thomas Kai'akapu, Department of Land and Natural Resources Division of Forestry and Wildlife; Maura O'Connor; Hob Osterlund, Kilauea Point National Wildlife Refuge; Bill Standley, U.S. Fish and Wildlife Service; Keith Swindle, U.S. Fish and Wildlife Service; Brenda Zaun, U.S. Fish and Wildlife Service; and Marjorie Ziegler, Conservation Council for Hawai'i. The design and layout was done by Helga Jervis, Graphic Design, and the poster was printed by Valenti Print Group.

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Ko Hawai'i leo no nā  
holoholona lohiu –  
Hawai'i's voice for wildlife

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# E Mālama Nā Manu Kai O Hawai'i Nei Care For The Seabirds Of Hawai'i Nei

*He 'a'o ka manu noho i ka lua, 'a'ole e loa'a i ka lima ke nao aku.*



It is an 'a'o, a bird that lives in a burrow and cannot be caught even when the arm is thrust into the hole.

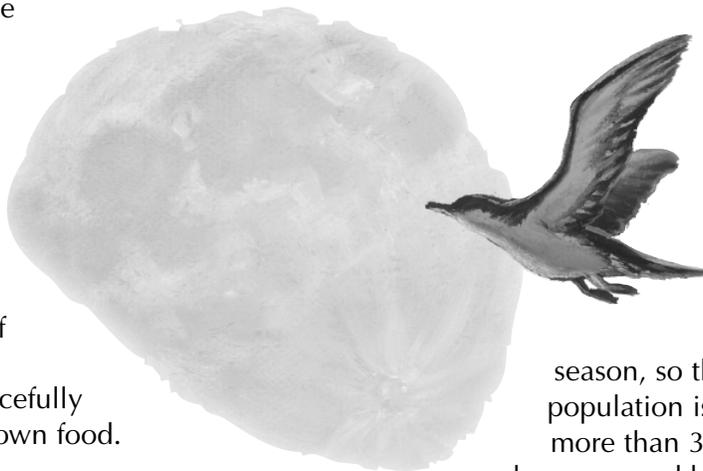
Said of a person who is too smart to be caught.

**'Ōlelo No'eau by Mary Kawena Pukui. Bishop Museum Press, 1983**

The setting sun on a late summer day casts the jagged slopes of Makaleha in a soft green glow against rosy clouds. As night gathers, a few stars pop out and a sudden braying cry like a wheezing honk, pierces the silence.

When morning approaches, Jupiter and Venus glow at opposite ends of the black sky. The distinctive cry breaks the silence again, and overhead out of the darkness, an 'a'o flies out of its mountain burrow. The 'a'o or Newell's shearwater, soars down from Kaua'i's steep mountain cliffs and flies out to sea to find food. Up on the cliff, the chick waits in the burrow, which is camouflaged by dense native uluhe ferns. With the setting sun the 'a'o returns to its mountain nest. It crash lands into the uluhe ferns, then claws its way through the thick ferns to the burrow where it regurgitates fish to the hungry chick. The shearwater's mate, who also helped to construct this cliffside nest and incubate the egg, arrives with more food for the growing chick.

One night, after 3 months of life in the burrow, the chick is finally big enough to leave the safety of the burrow. Drawn to the shimmer of moonlight on the ocean, the fledgling chick teeters to the edge of the cliff, spreads its wings, and soars gracefully off to sea to find its own food.



## FIRST FLIGHTS

For 'a'o chicks, first flights happen in the fall. Drawn to the shimmer of moonlight and starlight on the ocean, 'a'o fledglings leave their mountain burrows and make their maiden flights to the sea. Unfortunately, they often get distracted along the way by bright lights used to illuminate swimming pools, parking lots, roadsides, and sports fields. Disoriented, even blinded, the young birds circle the lights until they become exhausted, land, or collide with structures. Often, the shearwaters cannot get airborne again without human assistance. Seabirds also collide with utility lines that are strung across their flyways. Some are killed and many are injured. While grounded, they may be attacked by dogs or cats, or run over by cars.

About 200 to 300 downed 'a'o are picked up each year under the Save Our Shearwaters (SOS) program, which was started in 1979. Every fall, fire stations around Kaua'i put out special holding boxes where people can leave any seabird they find. After a physical examination, healthy birds are tagged and released. About 92 percent of the recovered birds are set free, but we don't know how many survive to return to breed. Only a few tagged birds have been recovered. In the early 1980s, it wasn't uncommon for 2,000 'a'o to be picked up in a season, so the lower numbers now are a sign the population is steadily declining. Since 1979, more than 32,000 shearwaters and petrels have been rescued by the SOS Program on Kaua'i

## LIFE AT SEA

Once a seabird chick flies away from its nest, it spends the next phase of its life entirely at sea. It is completely on its own, and must teach itself how to survive. Hawaiian seabirds travel vast distances, searching the oceans of the world for food, which include fish, squid, flyingfish eggs, jellyfish, and crustaceans.

Young seabirds will stay at sea for several years, returning to land when they are ready to breed. Although seabirds tend to mate for life, they fly solo until they reunite on land. Mōlī (Laysan albatrosses) will return to the islands for several years, practicing the elaborate bowing and crooning of the courtship ritual, until they pick a mate. Somehow, all seabirds know when to return, and how to find their mates among the thousands of birds at a breeding colony.

The Papahānaumokuākea Marine National Monument in the Northwestern Hawaiian Islands and Kīlauea Point National Wildlife Refuge on Kauaʻi are major breeding seabird areas. However, there are at least some seabirds nesting on all the Hawaiian Islands, as well as the islets and large rocks in the ocean around them.

## MARVELS OF ENGINEERING

It's not easy to survive for long months — even years — at sea. But seabirds have special traits that allow them to thrive in the harsh conditions of their ocean home. Most Hawaiian seabirds have waterproof feathers and webbed feet. Some have even developed thick skulls and air sacs on their necks that help cushion the impact of diving from great heights into the sea.

Seabirds are marvels of engineering. Watch seabirds aloft and appreciate how they can glide effortlessly, skim the water's surface, hover over their prey or stop, start and twist in mid-air.

## HAWAIIAN SEABIRDS

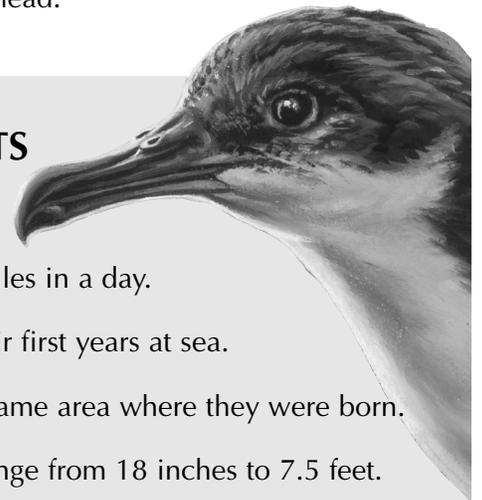
Like other seabirds, the 'a'o spends most of its life at sea, coming ashore only to mate and nest. In this way, they are distinct from birds that spend all their lives on land. Some 22 species of seabirds raise their young in the Hawaiian Islands. 'A'o belong to a group of seabirds that includes the shearwaters, albatrosses, and petrels. This group of birds has sharply hooked bills that help them to catch fish. They also have an excellent sense of smell that helps them find food out at sea where they hunt. Look closely at their bills to see the nostrils of these tube-nosed seabirds. The 'a'o, the Hawaiian petrel, and Hawaiian storm-petrel are particularly important because they are endemic to Hawai'i, which means they breed only in Hawai'i.

Noddies and terns belong to another group of seabirds that also includes seasonal visitors such as the kōlea (Pacific golden plovers). The delicate manu o Kū (white tern), with its fluttery wings and big black eyes, is often seen on O'ahu, even in urban Honolulu. White Terns make no nest at all, and their eggs are sometimes spotted perched precariously on the ledge of a Honolulu high-rise.

Koa'e kea (white-tailed tropicbirds), koa'e 'ula (red-tailed tropicbirds), 'iwa (frigate birds), and 'ā (boobies) belong to the third group of Hawaiian seabirds. 'Iwa, which means "thief" in Hawaiian, is an apt name for birds that steal food from boobies and shearwaters returning to their nests. The distinctive black 'iwa birds, with their seven-foot wingspans, feed primarily at sea, but fly to land when storms are approaching. Watch for their large "W" silhouettes as they soar overhead.

### FASCINATING FEATHERED FACTS

- ✿ Some seabirds can sleep while they fly.
- ✿ Mōlī (Laysan albatrosses) can fly 1,000 miles in a day.
- ✿ Sooty terns are always in flight during their first years at sea.
- ✿ Seabirds most often return to nest in the same area where they were born.
- ✿ Hawai'i's seabirds have wingspans that range from 18 inches to 7.5 feet.
- ✿ Seabirds can live a very long time. The oldest known bird in North America is a 57-year-old mōlī named Wisdom, who is still raising chicks.



## CULTURAL TRADITIONS

*Pōhai ka manu maluna, he i'a ko lalo.*

When the birds circle above, there are fish below.

‘Ōlelo No‘eau by Mary Kawena Pukui.  
Bishop Museum Press, 1983

Hawaiians watch the flights of seabirds to locate schools of fish, to help forecast the weather, and to locate islands when out at sea. Birds such as the manu o Kū are sometimes referred to as a navigator's best friend because they occur in higher densities closer to islands and will lead a weary navigator home. Early Polynesians probably watched the flight patterns of migrating seabirds before setting sail to distant islands.

Hawaiian mythology includes stories of tropicbirds and ‘iwa being used as messengers for their gods. Feathers of tropicbirds and frigates also adorn Hawaiian kāhili (feather standards) and ‘ahu ‘ula (feather capes), and lei.

Hawaiians once relied on seabirds as a food source. Seabird eggs were eaten and the birds were prized for their oily flesh, which tasted of squid. To catch the young petrel and shearwater chicks in their burrows, Hawaiians used smoke to disorient and disable flocks of adults flying to and from the nesting colonies. According to another account, birdcatchers used a piece of ‘ie‘ie (climbing pandanus) root gummed at one end to catch the fledgling Hawaiian petrels.

## THREATS TO SEABIRDS

Humans and the invasive species they brought to Hawai‘i pose the primary threat to seabirds. Mo‘olelo (stories) and archaeological evidence indicate that seabirds, such as the ‘ua‘u (Hawaiian petrels), were once abundant on the islands. The skies over Pelekunu, Moloka‘i and the saddle between Mauna Kea and Mauna Loa on Hawai‘i were blackened by the large number of ‘ua‘u flying to upland nesting habitat at twilight after a day of hunting at sea. The bones of the ‘ua‘u are the most frequently found “fossil” bones in the

Kalaeloa (Barber’s Point) sinkhole preserve, but this bird is no longer found on O‘ahu. Today, only very small populations of ‘ua‘u remain on Kaua‘i, Maui, Hawai‘i, and Lāna‘i.

The introduction of mammals such as rats, mongoose, cats, pigs, and dogs has almost completely eliminated seabirds from their breeding sites on the main Hawaiian Islands. These species evolved without exposure to land mammals so lack the behaviors to defend themselves or their eggs and chicks. Broad-scale rodent control and other predator control are necessary. Feral and domestic/pet dogs are also responsible for killing dozens of ‘ua‘u kani (wedge-tailed shearwaters) on the main islands. Another threat is the strawberry guava forests and other invasive plants that are choking out bird habitat. Seabirds drown when they attempt to take bait from the millions of hooks set by longline fishing boats. In the past, the ‘ua‘u also declined due to excessive hunting, and other seabirds were killed to supply feathers to the hat trade.

Plastic trash and nets also contribute to seabird deaths. Seabirds swallow their food, storing it in their stomachs while they catch more fish and squid. Parents later regurgitate a stream of goopy, oily liquid down the throats of their hungry chicks. Unfortunately, this efficient feeding method has exposed seabirds, especially albatrosses, to a dangerous new threat. While feeding on the ocean’s surface, the birds frequently ingest floating plastic pieces to which their prey of flying fish egg is attached. The plastic debris of our modern lives, such as cigarette lighters,

toothbrushes, bottle caps, and other items are unknowingly fed to their chicks, along with the regurgitated fish. Chicks normally will cough up indigestible items, such as squid beaks. But since they are sometimes unable to cough up very large pieces of plastic, chicks may either starve to death or die of dehydration while filled with too much plastic.

Nesting areas on low-lying islands are threatened by the sea level rise that is expected to accompany global climate change. Entire nesting islands, Tern, Midway, and Laysan, may disappear. We must protect and manage “high-water habitat” for the seabirds.

## HAWAIIAN TERMS

‘ā — boobies  
‘ahu ‘ula — feather capes  
‘a‘o — Newell’s shearwater  
‘ie‘ie — climbing pandanus  
‘iwa — frigate bird  
kāhili — feather standards  
kāwelu — native grass  
koa‘e kea — white-tailed tropic bird  
koa‘e ‘ula — red-tailed tropic bird  
kōlea — Pacific golden plover  
manu o Kū — white tern  
mōlī — Laysan albatross  
mo‘olelo — story  
‘ua‘u — Hawaiian petrel  
‘ua‘u kani — wedge-tailed shearwater  
uluhe — native fern



## SIGNS OF HOPE

Although seabird numbers are far lower than they once were, there are signs of hope. Small populations of 'ua'u recently have been found on Lāna'i and Hawai'i, and mōlī have been successfully nesting on Kaua'i and O'ahu for the last 25 years at sites where mammals are excluded and controlled.

Because their populations are so small, the 'a'o and 'ua'u are on the Threatened and Endangered Species List. All seabirds are protected by the Migratory Bird Treaty Act.

## MĀLAMA NĀ MANU – PROTECT THE BIRDS

- ✿ Avoid buying plastic whenever possible. Avoid disposable and single-use items. Carry your own refillable water bottle. Purchase soft drinks in cans or glass.
- ✿ Pick up litter from the beach.
- ✿ Turn off outside lights at night between mid-September and mid-December and install lights that are shielded to prevent them from shining upward or out to sea and disorienting seabirds.
- ✿ Leash or restrain your dog and keep your cat indoors to prevent your pets from harming seabirds
- ✿ Rescue fallen seabirds. On O'ahu, take rescued birds to Sea Life Park in Waimānalo 259-7933. On Kaua'i, visit <http://alohaforanimals.com/shearwaters.asp> for a list of Save Our Shearwaters Aid Station locations near you.
- ✿ Help protect "high-water" and other seabird habitats, such as our offshore islets and wildlife sanctuaries. Support rat and other predator control.
- ✿ Learn more about seabirds in Hawai'i and teach others what you learn.

## NATIVE PLANTS AND ANIMALS FEATURED ON POSTER

'a'o — Newell's shearwater

kāwelu — native grass

uluhe — native fern



## RESOURCES

### TEACHER'S GUIDES

*A Teacher's Guide to Navigating Change*. 2nd Edition, 2008. Bishop Museum, The Co-Trustees of the Papahānaumokuākea Marine National Monument, and Polynesian Voyaging Society. Honolulu, HI.

### BOOKS

*Hawaiian Birds of the Sea Nā Manu Kai* by Robert Shallenberger. University of Hawai'i Press, 2009

*Eye of the Albatross Visions of Hope and Survival* by Carl Safina. Henry Holt and Company, 2003

*Hawaiian Mythology* by Martha Beckwith. University of Hawai'i Press, 1970

*Hawaiian Birdlife Andrew* by John Berger. University of Hawai'i Press, 1983

*Seabirds of Hawai'i Natural History and Conservation* by Craig S. Harrison. Cornell University Press, 1990

*'Ōlelo No'eau Hawaiian Proverbs and Poetical Sayings* by Mary Kawena Pukui. Bishop Museum Press, 1983

### WEB SITES

[www.cascadiaresearch.org/robin/HIseabirds.htm](http://www.cascadiaresearch.org/robin/HIseabirds.htm)

[www.hawaiiudubon.com/gallery.html](http://www.hawaiiudubon.com/gallery.html)

<http://alohaforanimals.com/shearwaters.asp>

<http://bna.birds.cornell.edu/bna/species/297/articles/>

<http://www.botany.hawaii.edu/gradstud/eijzenga/seabirdshawaii/index.htm>

<http://www.kauai-seabirdhcp.info/>

<http://pvs.kcc.hawaii.edu/navigate/navigate.html>

<http://www.kilaueapoint.org/>



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