

## Conservation Council for Hawaii Summary

**Mission:** To educate, advocate, and fight to protect Hawaii's wildlife.

**Category:** Environment Preservation and Education

**Contact:** Jonetta Peters, Executive Director

**Address:** P.O. Box 2923, Honolulu, HI 96802

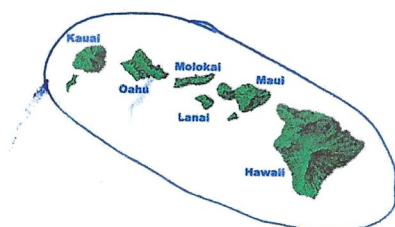
**Grant History:**

2016:	\$30,000
2017:	\$30,000
2018:	\$20,000
2020:	\$20,000
2021:	\$20,000
<b>TOTAL GRANTS TO DATE: \$120,000</b>	

<b>2025 Request:</b> <b>\$10,000 for poster campaign general operating support</b>
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### Notes:

- Formed 70 years ago.
- Affiliate of National Wildlife Federation.
- 5000 members.
- Laurence Dorcy was a member.
- Current highlighted programs are to protect Hawaii's seabirds, raise awareness about avian malaria, and to control invasive mammalian predators.
- Capital campaign is to build a digital infrastructure, salesforce and social media platforms, purchase computer and videography equipment, licensing, etc. Significant in-kind donations were received to lay groundwork for campaign.
- 2021: general operating support. Declined IT upgrades.
- 2025: Poster campaign helps promote conservation and includes a teacher's guide for furthering education efforts about preserving wildlife and effects of noninvasive species.
- Pilot project with Ilima Intermediate School to provide field experience at Freeman Seabird Preserve.
- Poster campaign costs \$15,500.











The original artwork was created by Patrick Ching ([www.patrickchingart.com](http://www.patrickchingart.com)). The text was written by biologists Dr. Rachel Sprague, Pūlama Lāna'i, and Dr. André F. Raine, Kaua'i Endangered Seabird Recovery Project; with kōkua from Kepā Maly, Lāna'i Culture and Heritage Center, and Moana Bjur and Jonee Peters, Conservation Council for Hawai'i.

**Mahalo nui loa for support of this poster:**  
Laurence H. Dorcy Hawaiian Foundation  
and  
Patagonia Works



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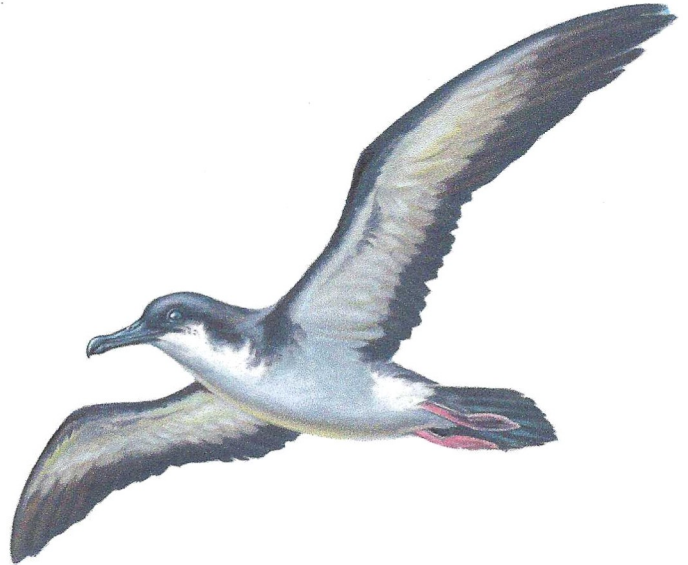
# Endangered Native Seabirds

Poster Guide for Classrooms

## About the Location: Hauola Canyon

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Hauola Canyon is the deepest drainage on the island of Lānaʻi. Starting in the piko of the island at the ʻuluhe fern-covered ridge of Lānaʻi Hale, Hauola flows out to the northeast side of the island toward the ʻAuʻau Channel between Lānaʻi and Maui. With the ~3,300 ft peak of Lānaʻi Hale still within reach of avian malaria-carrying mosquitoes, native forest birds are no longer seen. But the cloud forest ridges ARE still occupied by significant colonies of native seabirds.



The upper reaches of Hauola Canyon in particular are home to endangered species, including ʻuaʻu (Hawaiian petrel), endemic kāhuli (native tree snails), the Lānaʻi hala pepe (*Chrysodracon fernaldii*), and other extremely rare plants. Further down the canyon, endangered ʻakeʻake (band-rumped storm-petrels) have been discovered nesting in significant numbers in the nearly 1,200 ft cliff walls. ʻAʻo (Newell's shearwater) have been heard flying over the canyon, and likely nested in the area historically.

On the coast, at the mouth of Hauola watershed, ʻakekeke (ruddy turnstone) and other migratory shorebirds forage along the beaches during their winter visits to Hawaiʻi. The protective and expansive reef system on the windward coast is one of the most important in Maui County. The coastline was home to a vibrant Native Hawaiian community, and remains important to the people of Lānaʻi today, with its kahua hale (house sites), loko iʻa (fishponds), heiau (ceremonial site), kiʻi pōhaku (petroglyphs), and other wahi pana (storied-sacred places). One of these is the place called Lānaʻi kaula, described as the place where the young banished chief, Kaululāʻau, lit his fire to signal to the people of Maui that he had survived exile and killed the ghosts that inhabited Lānaʻi. This poster depicts a view from the ridge of Lānaʻi Hale to Lānaʻi kaula on the coast, and echos a proverb of Lānaʻi's people —

*Ina e ike ia Lanaikaula a me Lanaihale,  
alaila, puni ka o Lanai, pela ka olelo ia.  
If you see Lanaikaula and Lanaihale,  
then you have encircled all of Lanai, so it is said.  
(Nupepa Kuokoa, Kepakemapa 21, 1872:2)*



**Conservation  
Council for  
Hawai'i**

This guide is produced by the Conservation Council for Hawai'i with generous support from the Laurence H. Dorcy Hawaiian Foundation and Patagonia Works. For more information, visit [conservehi.org/seabirds](http://conservehi.org/seabirds).



# Hawai'i's Endangered Seabirds - Manu Kai Kuahiwi

## Seabirds in the Upland Mountains

Mauka to Makai ... and Makai to Mauka  
Many people in Hawai'i know of the important mauka to makai connection - how care of the land (or harmful actions on land) affects the health of the ocean. But fewer people are aware of how the islands' native seabirds have historically been the return connection from makai to mauka. These ocean wanderers travel thousands of miles across the northern and central Pacific, coming only to islands to nest and raise young ... but when they come to land, they bring important marine nutrients in their guano to the nutrient-poor volcanic soils of Hawai'i. By doing this, healthy native seabird colonies have helped create Hawai'i's native forests. In some areas, nearly 30% of nitrogen in the leaves of dominant native tree species is from marine sources ... brought to the forest ridges by our native seabirds. Today, Lāna'i's native forest area is reduced to just 3% of what it once was, after hundreds of years of damage from ranching, introduced ungulates, and agriculture. Along with watershed protection and habitat conservation efforts, healthy colonies of native seabirds (and their nutrient-rich guano) will contribute to the restoration of the forest on Lāna'i Hale.

The main Hawaiian Islands are home to three endangered species of seabirds:

### **'Ua'u, Hawaiian Petrel, *Pterodroma sandwichensis***

**Conservation Status:** Endangered, endemic to Hawai'i

**Distribution:** High elevations of Hawai'i, Maui, Kaua'i, Lāna'i, and Moloka'i; marine distribution throughout the northern Pacific Ocean.

### **'A'o, Newell's Shearwater, *Puffinus newelli***

**Conservation Status:** Threatened, endemic to Hawai'i

**Distribution:** High elevations of Kaua'i, with small numbers on Hawai'i Island, Maui, and possibly Lehua Islet; marine distribution throughout the northern Pacific Ocean.

### **'Ake'ake, Band-rumped Storm-petrel, *Oceanodroma castro***

**Conservation Status:** Endangered

**Distribution:** Breeds on islands in the Atlantic and Pacific Oceans; marine distribution throughout the central Atlantic and Pacific Oceans.

'Ua'u and 'a'o are endemic to the main Hawaiian Islands, and were once abundant and widely distributed across Hawai'i, with bones found in vast numbers at numerous archaeological sites throughout the Hawaiian Islands. Unfortunately, recent radar studies on Kaua'i over a 20 year period revealed that 'ua'u suffered a catastrophic population decline of 78% and 'a'o declined over 94% over the same time period. 'Ake'ake are found nesting on islands in the Atlantic and Pacific Oceans, but due to the difficulty in studying them, their population numbers and trajectory in Hawai'i is unknown.

All three species - 'ua'u, 'a'o, and 'ake'ake - spend their majority of their lives at sea, except during the breeding season, when they fly to and from their burrows in the remote mountains and cliffs of the Hawaiian Islands only at night. While the exact timing differs across the main Hawaiian Islands, these seabirds generally return to the islands in the spring to reunite with their mate and lay eggs by late spring. Once their chicks hatch after approximately 2 months of incubation, tracking studies have shown that both parents to head out to sea, with each taking turns undertaking short 3-4 day trips in the vicinity of the Hawaiian Islands, and long 14-21 day trips where they fly over 6,000 miles in one trip, nearly to the Aleutian Islands and back. Once the chicks finally depart their burrows in November and December, the young birds will spend their first few years of life entirely at sea, not touching land until they are 3 or 4 years old. At that point, the young adults finally return to the nesting colony where they



were born to start looking for a mate and digging a burrow together, often not starting actual breeding until they are 5 or 6 years old. In the northern Pacific Ocean, 'ua'u forage around feeding schools of predatory fish, such as tuna and mahi mahi, relying on these predators to drive smaller prey such as squid and fish close to the surface of the ocean where 'ua'u can then seize them. 'A'o eat flying fish and squid, and like many shearwaters, they are excellent divers and can pursue their prey to depths of over 150 feet! Meanwhile, 'ake'ake often "tap dance" along the water with their feet and flap their wings just above wave crests. This allows them to scoop up prey with their bill at, or just below the surface of the sea.

## Other Featured Native Wildlife

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### *'Akekeke, Ruddy Turnstone, Arenaria interpres*

**Conservation Status:** Least concern, protected by the Migratory Bird Treaty Act

**Distribution:** Breeds in northern parts of Eurasia and North America, highly migratory and found coastally in the winter across the northern and southern hemispheres.

'Akekeke are a small wading bird in the sandpiper family. While it breeds in the northern parts of Eurasia and North America, it can be found on coastlines almost worldwide in the winter. Like their larger cousins the kōlea (Pacific golden plover, or *Pluvialis fulva*), 'akekeke were known to early Hawaiians as winter visitors to the islands.

### *Kāhuli, Lāna'i Tree Snail, Partulina variabilis*

**Conservation Status:** Endangered, endemic to Lāna'i

**Distribution:** Found in a handful of small locations in the high-elevation mesic forest on Lāna'i

Lāna'i has several endemic species of kāhuli, including the one in this artwork, *Partulina variabilis*. This species is now only found in a handful of small populations across Lāna'i Hale, possibly numbering only a few hundred. Lāna'i kāhuli live on trees, and eat fungus growing on the surface of bark and leaves. In this way, they contribute to the health and balance of native trees in the forest.

Hawai'i's native terrestrial snails once had incredible diversity, with over 750 species described across the islands, many endemic to a single island or even single mountain range. These snails were the subject of chants and poetry, part of descriptions of places, and even believed to sing. They were called kāhuli or "pūpūkanioe," meaning the shell that sounds long. The first sections of the Kumulipo (a Hawaiian creation chant), are dedicated to invertebrates in the land and sea. While hundreds of those species are now extinct, some new species of kāhuli are still being described.

The extinction of over half of Hawai'i's kāhuli species has been driven by the introduction of the carnivorous rosy wolf snail and other invasive predators such as rats and Jackson's chameleons, as well as devastating habitat loss. The survival of the remaining species is reliant upon active conservation to preserve breeding populations and protect kāhuli in their native habitat from predators.

## Featured Native Plants

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### *Lāna'i hala pepe, Chrysodracon fernaldii*

Lāna'i hala pepe is a flowering plant endemic to the dry and mesic forests on the island of Lāna'i. The entire genus, *Chrysodracon*, is endemic to the Hawaiian Islands, and there are 6 different species, each endemic to its own island. The name "hala pepe," apparently meaning "baby hala," most likely references the species' likeness to hala (*Pandanus tectorius*). Hala pepe is sacred to Laka, the goddess of hula. These beautiful trees are known for their stunning cascades of yellow flowers (used to make lei), followed by



berries that ripen to dark red. The leaves were used by early Hawaiians for chills, headaches, and to lower fevers. Hala pepe can grow to over 20 ft, but the leaves are susceptible to grazing damage by ungulates, and the flowers, fruits, and bark are known to be damaged and destroyed by non-native rats.

### ***‘Ōhi‘a lehua, *Metrosideros polymorpha****

‘Ōhi‘a is Hawai‘i’s most abundant native tree, with over 350 million trees across ~800,000 acres. It is an amazingly adaptable species - ‘ōhia are found from sea level up to the treeline at elevations of over 8,000 ft, and can survive in wet and mesic forests, cloud forests, dry forests, dry shrublands, and is one of the first colonizers of recent lava flows. Depending on the habitat, ‘ōhi‘a may be a tall tree or small prostate shrubs, with forms of every size in between. Some varieties have soft, fuzzy leaves, while others are more smooth and shiny. ‘Ōhi‘a are a keystone species of the forest and one of the most important trees for nectar-eating native Hawaiian forest birds. They similarly play a core role in the culture of Hawaiian people, with all parts of the tree used for tools, medicine, adornment for hula and other ceremonies, and ‘ōhi‘a have a central role in traditional mo‘olelo, mele, and ‘oli. The tree is a kinolau, or physical form, of multiple Hawaiian gods and goddesses, including Kū, Hi‘iaka, Kāne, Kapo, and Laka. ‘Ōhi‘a are 50% more effective at capturing and holding moisture, feeding streams, and re-charging aquifers than non-native strawberry guava, and hold nearly 40% of the total above-ground carbon in Hawai‘i’s forests. These keystone trees of the native forest face an uncertain future due to the threat of Rapid ‘Ōhi‘a Death (known as ROD), caused by two fungal pathogens, *Ceratocystis lukohia* (destroyer of ‘ōhi‘a), and *Ceratocystis huliohia* (disruptor of ‘ōhi‘i). ROD has killed hundreds of thousands of trees across multiple islands.

### ***‘Uluhe fern, *Dicranopteris linearis****

‘Uluhe is a common species of fern found widely distributed around the wet forests of the Old World tropics, including Polynesia and the Pacific

Islands. This fern spreads via cloning, and can spread across the ground and other vegetation, creating dense mats 10-15 feet deep or more. As a keystone species in Hawaiian wet forests, the deep litter layer and live ferns act as a sponge, slowing the fall of rain to the ground, and holding water to slowly percolate into the volcanic soil. As ‘uluhe ground cover has been lost to non-native species, Hawaiian forests and watersheds have lost the ability to hold and slowly use water, causing problems with both surface erosion and loss of water from the aquifers. The dense systems of ferns create good structure for ‘ua‘u and ‘a‘o to dig their burrows in the mountains, and when intact, can help to limit the movement of invasive predators into the native forest.

## **Threats to Manu Kai**

### **Predation**

Hawai‘i’s seabirds evolved without mammalian predators, so the appearance of non-native mammals on the Hawaiian Islands, such as cats, dogs, rats, mongoose and pigs, has proven to be a significant threat to these ground-nesting birds (along with a wide range of other endemic Hawaiian bird species). Predators attack and kill adults, chicks, and eggs, and can cause significant damage to the breeding population in a very short span of time even in the most remote breeding colonies.

### **Artificial Light Attraction**

Hawai‘i’s endangered seabirds fly to and from their breeding colonies only at night. Human light pollution can confuse this behavior, particularly in fledglings during their very first journey from their colony to the sea. These fledglings become disoriented by bright lights and fly into buildings or become exhausted and land on the ground in a phenomenon known as “fall-out.” Once on the ground, they cannot fly again and either die from exposure and starvation, are eaten by feral cats and dogs, or run over by cars.

### **Collisions with Power Lines**

During the breeding season, adult birds fly back and forth from their fishing grounds at sea to their breeding colonies in the mountains. In



areas where utility lines cross the birds' flight paths, they can pose a collision risk - especially in areas where the lines are elevated well above the height of surrounding vegetation. This is a particular threat in areas where high exposed lines cross areas with large numbers or transiting or circling birds. Studies on Kaua'i have found that power line collisions kill thousands of seabirds each year.

### **Loss of Habitat**

Non-native mammals, especially deer, pigs, and goats, can destroy the native vegetation that provides such important breeding habitat for Hawai'i's endangered seabirds. Digging and trampling by hooved mammals destroys native vegetation and leads to invasion by exotic plants that can swiftly take over native forest. If left unchecked, this can ultimately result in dense stands of invasive, non-native species such as strawberry guava and ginger, making it impossible for seabirds to nest on the forest floor.

### **Marine Threats**

Less is known about threats to these birds at sea, but as with seabirds around the world it is highly likely that various threats at sea are also taking their toll on Hawai'i's shearwaters and petrels. These threats can include marine pollution (such as plastics and oil slicks), reductions in prey from overfishing, mortality through fisheries by-catch, and the far-reaching ramifications of climate change.

## **Recovery Solutions**

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Hawai'i's endangered seabirds face a number of threats, including introduced predators, light attraction, collision with power lines, loss of breeding habitat, habitat modification from invasive plants or introduced ungulates, and threats at sea. These accumulated threats have resulted in the catastrophic declines the species have experienced across the Hawaiian Islands. So what can be done to help them? There are a number of large-scale conservation management projects underway across the state, but there are also many ways that you can help too.

### **Turning lights out...**

During the fledging season (which spans late September to early December), newly fledged birds are attracted to artificial light sources. This issue is particularly exacerbated during periods when the nights are dark (i.e. when there is a new moon, or heavy cloud cover). Turning unnecessary lights out during this period, using lower intensity light bulbs and shielding outside lights so that light shines downward instead of into the sky are all simple ways of reducing this impact. And it saves money too!

### **Save Our Seabirds!**

During the peak fall-out period, rescue organizations operate on each island to provide assessment, first-aid stabilization, and release or longer-term medical care to downed birds. Be vigilant during this period for downed birds, particularly around bright light sources. If you find a downed bird, collect it and take it to an aid station or call for assistance. One of the permitted rescue groups will do the rest! If these downed birds are not collected then they will most likely die of starvation, exposure, vehicle collision, or predation, so please make sure you help them get to safety.

## **Who to call if you find an injured or downed seabird?**

Kaua'i: 808-635-5117

O'ahu: 808-884-5000 or 808-220-7802

Lāna'i: 808-563-0013 or 808-884-5000

Maui & Moloka'i: 808-573-BIRD (2473)

Hawai'i Island: 808-884-5000

### **Keep cats indoors**

Cats can cause significant damage to breeding colonies of endangered seabirds, and a single cat can quickly kill multiple breeding adults in a very short period of time, causing long-term damage to the breeding population. Keeping pet cats indoors and removing feral cat populations are ways to reduce this danger.



## Support conservation efforts

Many of Hawai'i's native species will not survive without active conservation assistance to prevent non-native plants from invading native habitat, restore already-degraded habitat, trap and remove non-native mammalian predators, and create predator-free islands and fenced areas for safe nesting habitat. Different governmental and private organizations across the islands are working hard on habitat restoration, predator control, and native wildlife monitoring (to assess the effectiveness of conservation actions), and would benefit from public support for conservation funding and management actions to create safe habitat for these rare species that depend on Hawai'i as their only home.

## Prevent arrival of new introduced predators

The arrival of the mongoose on other Hawaiian Islands has been devastating to native breeding birds, and the fact that they have yet to establish on Kaua'i and Lāna'i is part of the reason why those islands are still havens for rare endemics. Unfortunately, there is always the threat that mongoose may invade even these havens in the future. You can report possible sightings of mongoose, or other new introduced species like snakes, by phone or the [808] 643-PEST app, or [643pest.org](http://643pest.org).

Lastly, make sure that you don't bring anything harmful back with you when you travel inter-island, out of state, or internationally – invasive weeds, invertebrates and other pests can have a devastating impact on fragile island ecosystems, so preventing them from getting here in the first place, or traveling between islands, is the easiest solution. Wash your gear and shoes to be sure they are free from seeds before going back out.

## About this poster

Original artwork for this poster was created by Patrick Ching ([www.patrickchingart.com](http://www.patrickchingart.com)). The text was written by biologists Dr. Rachel Sprague, Pūlama Lāna'i, and Dr. André F. Raine, Kaua'i Endangered Seabird Recovery Project; with kōkua from Kepā Maly, Lāna'i Culture and Heritage Center; and Moana Bjur and Jonee Peters, Conservation Council for Hawai'i.



Funding provided by the Laurence H. Dorcy Hawaiian Foundation and Patagonia Works.



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Hawai'i affiliate of the National Wildlife Federation





# He Hawai'i Au

## Kūlia I Nā Kamalani O Kanaloa – Stand Firm For The Chiefly Children Of Kanaloa

This stunning block print was created by award-winning artist and author, Caren Loebel-Fried ([www.carenloebelfried.com](http://www.carenloebelfried.com)), who spent many hours observing, sketching, and photographing HŌ'ALONA – an amazing Hawaiian monk seal and model for the poster. The Teacher's Guide on the back of the poster was written by Kobun Watson-Sprout of Honua Consulting with kōkua from scientific and cultural advisors. This poster is dedicated to the 'dog running in the rough sea' and everyone who cares about the Hawaiian monk seal. Let them live!

Mahalo nui loa to Conservation Council for Hawai'i members and supporters, and the following Hawaiian Monk Seal Poster Patrons: Adopt a Beach Hawai'i with Save the Sea Turtles International; Ahaihi Mālama Ika Lōkahi; Aka'ula School Youth Board; Annette Karhelatili; Annette's Adventures; Rick Barboza 'Ohana; Randy Barlett; Rebecca Cassidy; Kainoa Bates; and Kurt and Lexi Poenitz Beach Environmental Awareness Campaign Hawai'i (B.E.A.C.); Ryan Baker and Thomas French 'Ohana; Wai'anae Beach Lida Pigeon Burner; and Dawa Burney; Cascadia Research Collective; Center for Biological Diversity; Patrick Ching Art; Marilyn and Lucky Cole; Fred Dodge and Karen Young; David Duffy; Pacific Cooperative Studies Unit; Senator Will Espere; Free Wind Energy; Friends of Lāna'i; Friends of Waikiki Aquarium; Betsy Harrison Gagné in memory of Wayne C. Gagné; Sean and Liz Gallagher; Sheryl P. Gaudner; Sharen Gassior; Isaac and Dana Naone Hall; Suzanne Hammer, MD; Hanalei

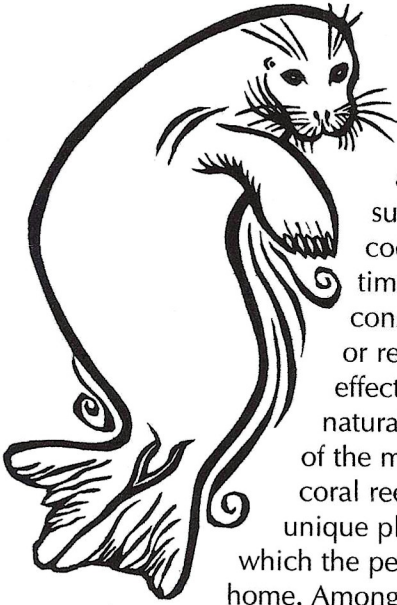
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## Kūlia I Nā Kamalani O Kanaloa *Stand Firm For The Chiefly Children Of Kanaloa*

Survival, culture, and traditions require sustainability and cooperation. In traditional times, the Hawaiian people considered it their *kuleana*, or responsibility, to effectively manage their natural resources from the top of the mountains to beyond the coral reefs. This included the unique plants and animals with which the people shared their island home. Among those species was the Hawaiian monk seal.

Today, the endangered Hawaiian monk seal needs everyone's cooperation if it is to survive and recover.

### He Hawai'i Au – I Am Hawaiian

Known for generations as *'Īlioholoikauaua* ('dog running in the toughness' and more recently, 'dog running in the rough sea'), the Hawaiian monk seal is endemic, which means it is unique to these islands and found naturally nowhere else in the world. It has existed on Earth for millions of years – longer than the Big Island of Hawai'i – and dwells in the realm of Kanaloa, the Hawaiian god of the ocean.

Records from old Hawaiian newspapers and other sources reveal that as many as 15,000 monk seals may have lived in the Hawaiian Islands during the time Polynesians colonized these islands, prior to western contact in 1778. Hawaiian *oli* (chants), *mo'olelo* (stories), and other forms of traditional knowledge tell us about the Hawaiian monk seal of the past.

The Kumulipo – a detailed chant that chronicles the creation story, genealogy, and mythology of ancient Hawai'i – includes the *'ioleholoikauaua* ('rat running beside the wave'), referring to the Hawaiian monk seal. The legend of Hawai'i Loa refers to the monk seal as *'Īlioholoikauaua-a-Lono* ('the dog running at the voice of Lono'), which is associated with the Hawaiian god, Lono.

Another reference to the monk seal exists in the oral tradition about the god, Hi'iakaikapoliopole (Hi'iaka), whose travels through the archipelago are recorded in a lengthy and detailed chant. In a translation of the chant, Hi'iaka describes Ka'ō'io Point on O'ahu:

*"There is a plain on the inland side and dangerous waters seaward, a place renowned in the saying, 'Lie calmly in the sea of your chief.' As we go along we will reach Makaua, land of the Ma'akua rain. That is where the 'Īlio hā of Kāne dwells, named Kauhike'īmakaokalani, an uncle of ours." In the story that follows, Hi'iaka continues: "The 'Īlio hā is like saying 'Īlio kāhā, an oversized, hulking dog, the same way a pig can be oversized. It means it is huge, heavy, plump, and fleshy. But this dog-uncle of ours you see there has the body of a massive dog, and the largest expanse of his fur is on his head and neck..."*

The description of the 'Īlio hā as "huge, heavy, plump, and fleshy" and as an "oversized" dog with the largest expanse of fur on his head and neck is reminiscent of the physical appearance of monk seals. In this chant, the animal is associated with the Hawaiian god, Kāne, who is traditionally associated with dogs.

### Monk Seal Place Names

Several sites in the Hawaiian archipelago are probably named after the Hawaiian monk seal. On the remote Kalaupapa peninsula on the rugged north coast of Moloka'i is a small cape and bay named 'Īlio-pi'i ('climbing dog'). This historical name is appropriate, as monk seals commonly pup on beaches in this area in modern times. Another site, Lae o Ka 'Īlio ('the headland of the dog'), is located at Hā'ena on the rural north shore of Kaua'i and refers to the *'Īlio hele i ka uaua* ('dog that runs in the rough sea'). The modern name, Holoikauaua, has been given to Pearl and Hermes Atoll in the Northwestern Hawaiian Islands. (NWHI). This name celebrates the Hawaiian monk seals that haul out and rest at the atoll.

Each of these place names possesses significant ecological importance for the monk seals in the current context, and at least two, 'Īlio-pi'i on Moloka'i and Lae o Ka 'Īlio on Kaua'i, are names that likely reference places on the main Hawaiian Islands where monk seals were common in historic and current times.

The traditional knowledge of Hawaiian monk seals in the main Hawaiian Islands is also supported by archaeological evidence. In 1996, an articulated skeleton of a juvenile seal was found in Wailuku, Maui. Carbon dating indicates that it was buried approximately 1640 AD, over 100 years before westerners arrived in Hawai'i but during the time humans occupied these islands.



## A Monk Seal's Life

The Hawaiian monk seal (*Monachus schauinslandi*) is a member of the Phocidae family. It is a pinniped – a group of marine mammals that includes seals, sea lions, and walruses with front and back flippers. Adult Hawaiian monk seals weigh 400 to 600 pounds; adult males and females are similar in size. The seals are generalist feeders, which means they eat a variety of foods depending on what is available, including many types of common fishes and eels, octopus, squid, and crustaceans (crabs, shrimp, and lobster). Studies and observations indicate that the seals prefer small, bottom-dwelling prey that hide in sand, under rocks, or in coral *puka* (holes) and are easier to catch than ulua, pāpio, 'ō'io, or most other locally popular game fish. The seals usually dive for an average of six minutes when feeding, but they can hold their breath for as long as 20 minutes and can dive as deep as 1,500 feet, however, they usually dive less than 200 feet to forage on the sea floor.

Hawaiian monk seals mate in the water during breeding season (December to August), and females can give birth when they are five to ten years old. Females may give birth to one pup a year. Newborns are approximately three feet long and weigh 25 to 30 pounds. Mothers stay with their pups on land or very close to shore for about six weeks nursing them. When the pups are weaned, they typically weigh between 110 and 180 pounds, while the mothers lose even more weight as a result of nursing and not leaving their pups to eat.

Monk seals usually sleep on the beach, sometimes for days at a time. Individual seals often frequent the same beaches over and over, but do not defend regular territories. SCUBA divers see seals sleeping underwater in small caves. Monk seals also haul out to molt, which takes about a week, losing their top layer of skin and fur.

The seals do not migrate seasonally, but some seals have been tracked traveling hundreds or thousands of miles in the open ocean and between the NWHI and main Hawaiian Islands. Although rare, seals have been observed as far away as Johnston Atoll and Wake Island.

Hawaiian monk seals can live for 25 to 30 years, however, few seals live this long.

## Status And Threats

The Hawaiian monk seal is the only marine mammal species that lives completely within waters of the

United States. It is unique to Hawai'i, and no other country, state, or community is responsible for its survival. The overall population is about 1,100 seals and is in decline and at risk of extinction unless the trend is reversed. About 900 monk seals now live in the NWHI, and at least 150 to 200 seals live in the main Hawaiian Islands. Although the number of seals in the NWHI subpopulation is declining at about four percent, the subpopulation in the main Hawaiian Islands has been increasing by six to seven percent annually, making it a bright spot in the battle against extinction. Most of the seals in the main Hawaiian Islands are concentrated on Ni'ihau, Kaua'i, Moloka'i, and O'ahu, with smaller numbers on Maui, Lāna'i, and Hawai'i.

A number of factors has contributed to the seal's decline, including human hunting of the species to near extinction in the mid-1800s; entanglement in floating marine debris, such as discarded fishing nets, lines, and ropes; loss of habitat for pupping and resting; competition for food with sharks and other predators in the NWHI; the killing of female seals and pups by aggressive male seals; cycles of NWHI ecosystem productivity; and shark predation on baby seals at French Frigate Shoals in the NWHI.

In the last 50 years, from 1958 to 2007, in a timeframe that corresponds with the height of commercial fishing in the NWHI, beach counts of Hawaiian monk seals have declined by about two thirds.

Because of its precariously low population, the Hawaiian monk seal is protected by the federal Endangered Species Act, Marine Mammal Protection Act, and Hawai'i state law. Intentionally harassing, harming, or killing a seal is a felony under state law, punishable by up to five years in prison and a \$50,000 fine. It is also a crime to intentionally harass, harm, or kill a monk seal under federal law.

Critical habitat was last officially designated for the monk seal in the NWHI in 1988. In 2011, NOAA National Marine Fisheries Service proposed expanding that designation, including important seal areas in the main Hawaiian Islands. Critical habitat does not create sanctuaries or nature preserves for the seals, or place restrictions on access to or use of these areas. A critical habitat designation places responsibility on the federal government to ensure that its actions or those it authorizes or funds do not destroy or adversely modify areas designated as critical habitat, and this helps protect our beaches and ocean. A recovery plan for the Hawaiian monk seal was revised in 2007. It sets recovery goals for the seal, such as the number of seals in the NWHI and main Hawaiian Islands that need to be established, and identifies necessary



recovery actions so that the seal is no longer in danger of going extinct.

State and federal wildlife agencies work with community volunteers, fishers, gatherers, cultural practitioners, and others to minimize and mitigate human-seal interactions in the following ways:

- Monitoring seal movements through reports of sightings phoned in by citizens on the different islands;
- Managing the safety of beach users and seals by setting up seal protection zones around individual seals;
- Issuing guidelines to fishers and the general public about how to respectfully and safely behave around seals and avoid human-seal interactions;
- Conducting outreach to fishers and local communities about seal behavior and needs;
- Providing veterinary care to seals wounded by fishing gear;
- Retraining or relocating seals that become nuisances to humans; and
- Conducting field research to understand the biology of the seals and ways to mitigate threats to survival.

## Kuleana And Kōkua

As the number of seals increases in the main Hawaiian Islands, so will the number of human-seal interactions and injuries to seals. Learning to appreciate and co-exist with our native wildlife has never been more important.

Here is what you can do to *kōkua* (help) the Hawaiian monk seal:

### AT THE BEACH

- Give seals the space they need to rest. Stay at least 150 feet away from the seals, farther if it is a mother and her pup. A good way to judge this distance is to hold your thumb out at arm's length and position the view of the seal between the tip and first knuckle of your thumb. If the seal appears outside of this range, you are too close.
- If a monk seal approaches you, move away to avoid interaction.
- Cautiously move away if you observe any of the following monk seal behaviors indicating it has been disturbed:
  - Female attempting to shield her pup with her body or by her movements;
  - Growling or barking, or rapid movement away from the disturbance; and
  - Sudden awakening from sleep on land.

- Do not enter seal protection zones on the beach. These zones are for their protection and your safety.
- Protect your dog and the seals from injury and disease transmission by keeping your dog on a leash when around seals.

### IN THE OCEAN

- Never feed monk seals or any other wild animal. Feeding encourages seals to interact with humans, can result in seals losing their natural behaviors, and can result in "nuisance" seals engaged in potentially dangerous interactions with humans.
- Monk seals may exhibit inquisitive behavior. Do not attempt to play or swim with a seal. This is harmful to the seal and dangerous to the swimmer.
- If you fish, move to another fishing area if you see a monk seal. Consider using barbless circle hooks, obey the laws for lay gillnets, monitor nets and lines, and dispose of unwanted fishing gear responsibly. If you hook a seal while fishing, report the incident and location. Reports may be made anonymously.

## Your Call Could Save A Seal

Keep the following telephone numbers handy on your mobile device and with you when you are at the ocean. Citizen volunteers and monk seal biologists are tracking the occurrences of monk seals in the main Hawaiian Islands to help ensure their safety.

- If you see or have an interaction with a monk seal, call the 24-hour toll-free hotline (888) 256-9840, or email the sighting to: [pifsc.monksealsighting@noaa.gov](mailto:pifsc.monksealsighting@noaa.gov).
- To directly contact the local Monk Seal Island Coordinators, call:

O'ahu:	220-7802
Maui/Lāna'i:	(808) 292-2372*
Kaua'i:	651-7668
East Hawai'i Island:	756-5961
Moloka'i:	553-5555
West Hawai'i Island:	987-0765

\* *The Maui/Lāna'i number is routed through O'ahu, so add the area code, 808, if you are calling from Maui or Lāna'i.*
- If you see a monk seal or other marine mammal that appears to be sick, injured, stranded, or otherwise in distress, call this marine mammal toll-free number day or night: (888) 256-9840. Calls and reports may be made anonymously.



## Did You Know?

The monk seal's common name may come from the thick fold of skin around the seal's neck, which resembles the cowl, or hood, of a monk's robe. The monk seal also lives a solitary life like a monk, and unlike sea lions and other marine mammals that live in colonies.

The Hawaiian monk seal is one of only two remaining monk seal species in the world; the other is the Mediterranean monk seal, with fewer than 500 seals in the wild. A third species – the Caribbean monk seal – was last seen in 1952 and officially declared extinct in 2008.

In 1979, the Hawaiian monk seal was named Hawai'i's official state marine mammal. In 2008, the Hawai'i state legislature designated it the official state mammal because of its rare and endemic status, and its importance to Hawaiian natural history and culture.

### MEET HŌ'AILONA

Hō'ailona, the model for this poster, was abandoned by his mother only a few days after his birth on Kaua'i in 2008. Rescuers found him desperately suckling a rock. Known as KP2 at the time, he was flown to O'ahu, where emergency crews and volunteers spent 24 hours a day, seven days a week, nursing him back to health and treating an eye condition. KP2 was then relocated to Kalaupapa, Moloka'i, but he soon showed up at Kaunakakai Pier, where he befriended the community. Moloka'i resident, Loretta Ritte, named him Hō'ailona ('sign' or 'symbol'). She considers this special seal a sign of the return of the monk seal to the main Hawaiian Islands and an opportunity to educate people about its importance and co-existing with wildlife.

Hō'ailona formed a strong bond with the people of Moloka'i. But as with most wild animals, strong association with humans can be a detriment to the seal and potentially dangerous to the humans. Because of Hō'ailona's conditioning to humans (resulting in the loss of his wild behaviors) and the continued deterioration of his eye condition, Hō'ailona was no longer able to survive in the wild. As a result, he was captured and flown to Santa Cruz, California for observation and medical treatment. In 2011, Hō'ailona returned to Hawai'i and now lives at the Waikīkī Aquarium with Maka Onaona, another handsome and amazing monk seal that is unable to survive in the wild.

Hō'ailona is a symbol of hope for his imperiled species and a reminder that we share our island home with others.

## AN ARTIST'S PERSPECTIVE

By Caren Loebel-Fried [www.carenloebelfried.com](http://www.carenloebelfried.com)

I am an artist and author, and the nature, culture, and legends of Hawai'i are my inspirations. The Hawaiian monk seal became my muse when I was commissioned by the Conservation Council for Hawai'i to create a block print of a seal for this poster. I have seen monk seals in the wild, and I have also spent time observing Hō'ailona, the young Hawaiian monk seal adopted by the Waikīkī Aquarium. At the underwater viewing area, as children came to the glass, he swam to them with curiosity. Over and over, he put his whiskered, puppy face close to the children's smiling faces. It was powerful and touching to see this young monk seal so keen on interacting with the human children.

Hō'ailona is truly an ambassador for his species. I realized he would make the perfect model for the poster, reaching hundreds of schools in Hawai'i. As he glided through the water with such grace, ease, and agility, I snapped photos and did quick sketches. I marveled at his body so well adapted to the liquid environment. My desire and greatest challenge was to capture in art Hō'ailona's engaging personality and his body in motion.

Art is such a powerful inspiration in the conservation of rare and endangered species. I hope my artwork helps save the Hawaiian monk seal.

## For More Information

[www.conservehi.org](http://www.conservehi.org)  
[www.earthtrust.org/wlcurric/seals.html](http://www.earthtrust.org/wlcurric/seals.html)  
[www.kahea.org/issues/ocean-protection/hawaiian-monk-seals](http://www.kahea.org/issues/ocean-protection/hawaiian-monk-seals)  
[www.kauaimonkseal.com](http://www.kauaimonkseal.com)  
[www.marine-conservation.org/what-we-do/program-areas/mpas/pacific-islands-conservation/hawaiian-monk-seals/](http://www.marine-conservation.org/what-we-do/program-areas/mpas/pacific-islands-conservation/hawaiian-monk-seals/)  
[www.marinemammalcenter.org/Get-Involved/awareness-campaigns/save-the-hawaii-monk-seal.html](http://www.marinemammalcenter.org/Get-Involved/awareness-campaigns/save-the-hawaii-monk-seal.html)  
[www.monksealfoundation.org/Home.aspx](http://www.monksealfoundation.org/Home.aspx)  
[www.nameahulu.org](http://www.nameahulu.org)  
[www.pifsc.noaa.gov/hawaiian\\_monk\\_seal/](http://www.pifsc.noaa.gov/hawaiian_monk_seal/)  
[www.wildhawaii.org/marinelife/seals.html](http://www.wildhawaii.org/marinelife/seals.html)  
[facebook.com/HMSRP](https://facebook.com/HMSRP)  
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[monksealmania.blogspot.com/2012/06/puuhonua-initiative.html](http://monksealmania.blogspot.com/2012/06/puuhonua-initiative.html)



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*This poster can be found at [www.conservehi.org](http://www.conservehi.org). For copies or to help us produce the next annual wildlife education poster, contact CCH on O'ahu at (808) 593-0255 or [info@conservehi.org](mailto:info@conservehi.org).*