NATURAL HISTORY AND CONSERVATION

of the Hawaiian Monk Seal

U.S. Department of Commerce | National Oceanic and Atmospheric Administration
National Marine Fisheries Service

NATURAL HISTORY

Things You Should Know About the Hawaiian Monk Seal

The Hawaiian monk seal is...

- known by many traditional Hawaiian names, including 'ilio-o-ke-kai ("dog of the sea"), 'ilio-holo-i-ka-uaua ("dog running in the rough seas"), and mea hulu ("furry one").
- part of a healthy Hawaiian ecosystem.
- endemic to the Hawaiian Islands archipelago and Johnston Atoll, meaning they are native and exist nowhere else on Earth.
- one of only two mammals native to Hawai'i's terrestrial environment.
- one of the most endangered animal species in the world. Only about 1,100 seals are left and their overall population is in decline.
- protected by the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), and Hawai'i state law.
- Hawai'i's official state mammal.

Taxonomy

Hawaiian monk seals, *Monachus schauinslandi*, are one of three species of seals in the genus *Monachus*, the oldest group of seals on earth.

- The Caribbean monk seal is extinct, with the last wild animal seen in 1952.
- The Mediterranean monk seal numbers are in the low hundreds.

Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Carnivora
Family: Phocidae
Genus: *Monachus*
Species: *schauinslandi*

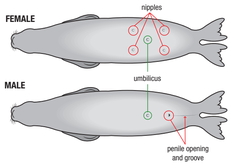
Physical Description

- Adult Hawaiian monk seals are about 6-7 feet in length and can weigh up to 400-600 pounds.
- Their maximum age is 25-30 years.
- Monk seals molt, or shed the top layer of their skin and fur, once a year.
- Males and females are similar in size and appearance.

How to Tell Seals Apart

Most Hawaiian monk seals have unique natural markings, such as scars, that help identify individual seals. Some seals have identifiers that are applied by authorized NOAA Fisheries personnel to help keep track of individual animals, such as flipper tags and temporary bleach marks.

The only way to confirm whether a seal is female or male is by looking at its belly:



Diet

Hawaiian monk seals are "generalist" feeders, meaning they eat a wide variety of foods, depending on what is available. It is estimated that an average adult monk seal, weighing 300 pounds, may eat up to 5% of its body mass each day, or about 15 pounds. But monk seals come in many different sizes, and eat many different types of common small fishes, squid, octopus, eels and crustaceans (crabs, shrimp and lobster). Diet studies indicate that Hawaiian monk seals prefer prey that hide on the bottom, in the sand or under rocks. In contrast, most of the locally popular gamefish that are caught by fishermen (for example, ulua, ahi and mahi-mahi) spend their time swimming in open water. Monk seals are a natural part of Hawai'i's complex marine ecosystem with many species interacting, so their impact on any one local fish population is limited.

Main threats to Hawaiian monk seals in the Northwestern Hawaiian Islands (NWHI) and the main Hawaiian Islands (MHI)

- Starvation (NWHI)
- Unusual shark predation on pups at one atoll (NWHI)
- Aggressive male seals attacking other seals (NWHI)
- Entanglement in marine debris and fishing gear (NWHI and MHI)
- Infectious disease and biotoxins (NWHI and MHI)
- Habitat loss due to climate change and human development (NWHI and MHI)
- Human disturbance (MHI)

As a result of these threats, most pups in the Northwestern Hawaiian Islands do not live to age 3 and less than 1 of every 5 seals survives to reproductive age. This high mortality threatens the overall survival of the Hawaiian monk seal species.

One Person Can Make a Difference

Protect the Hawaiian monk seal, let sleeping seals lie.

- It is natural for monk seals to come ashore, or haul out, on the beach for long periods of time. **Please give seals space to rest, molt, give birth and care for their pups.** Stay outside of roped seal protection areas.
- **Keep a distance of at least 150 feet from all seals in areas where seals have not been roped off**. Use binoculars to view animals from a distance without disturbing them.
- In the ocean, monk seals may exhibit inquisitive behavior. **Avoid approaching or "playing" with these seals.** If approached by a seal, move away to avoid interaction.
- Allow seals to remain wild and hunt for food on their own. **Feeding seals is illegal** and may cause them to become dependent on humans for food. This may decrease the seal's chances of survival in the wild.
- Please remember to **keep your dog on a leash at all times** when in the presence of monk seals to avoid injury and prevent disease transmission for both the dog and the seal.

Assist Researchers and Help Seals:

Please report all seal sightings and human-seal interactions:

NOAA Fisheries monk seal hotline at: (888) 256-9840

email: *PIFSC.monksealsighting@noaa.gov*

How to Prevent Seals from Getting Your Fish and Bait

Fishermen are partners in ocean stewardship and fishing has deep cultural roots of many local families. NOAA scientists have started working with fishermen to conduct research to better understand and mitigate fisheries interactions. Seal conservationists and Hawai'i's fishermen have a lot to learn from each other while working together on marine conservation issues.

What can be done to minimize the possibility of a seal eating a fisherman's catch or stealing bait?

1. Don't feed the seals or discard old bait or scraps into the water if seals are known to frequent or are seen in the area. A seal that has been fed even once may associate humans with food and persistently seek out humans thereafter. This creates possible risks for humans and reduces the seal's natural instincts to hunt on its own, which hurts its chances for long-term survival in the wild.

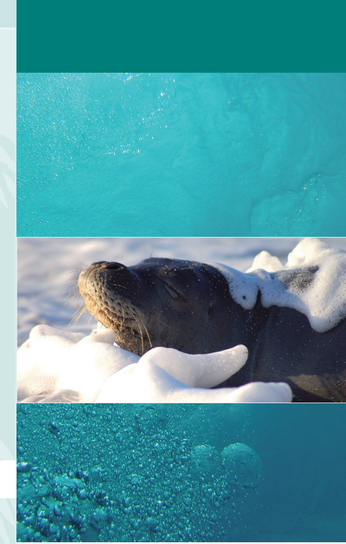
2. If a seal is encountered while fishing, take a short break or change locations. Seals are curious creatures and investigate everything. Taking a short break from fishing while they are passing through the immediate area may allow them to move through quickly.

3. Use a barbless circle hook. Barbless hooks help minimize hooking injuries. Barbless hooks have been proven to be effective in catching fish as well as retaining bait. Live bait can be bridled and fished effectively. To learn more about barbless hooks, visit the Barbless Hook Project website: http://www.pifsc.noaa.gov/outreach/barblesshook.php

Critical Habitat Designation

Critical habitat is a specific area, or areas, that may contain natural features that are essential for an endangered or threatened animal or plant to survive, not go extinct, and recover to a healthy population. A critical habitat designation does not directly impact one's access or ability to recreate on the public beaches of Hawai'i. Critical habitat designation only directly affects federal activities: those that are federally authorized, carried out or funded.

For more information, please see our critical habitat webpage:
http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html



NOAA Fisheries permit 9321305

NOAA Fisheries
Pacific Islands Region
Visit our websites for more information.
Pacific Islands Regional Office
http://www.fpir.noaa.gov
Pacific Islands Fisheries Science Center
http://www.pifsc.noaa.gov

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HISTORICAL TIMELINE OF THE HAWAIIAN MONK SEAL

Past to Present

Monk seals have lived in the Hawaiian archipelago for a very long time. Archeological and historical records indicate the seals have occupied the main Hawaiian Islands for at least the past several hundred years, and everything we know about monk seals suggests that the entire archipelago has served as monk seal habitat for millions of years.

70 mya (million years ago)

A series of volcanic eruptions begins that will form the islands of the Hawaiian archipelago.

10-11.6 mya

Monk seals as we know them today first appear in the oceans.

3.5-11.6 mya

Monk seals make their way to Hawai'i presumably through a previously existing open water passage between North and South America called the Central American Seaway.

1000-1290 A.D.

The first Polynesian settlers arrive in Hawai'i.

1400-1750

Hawaiian monk seal remains are buried in a Hawaiian midden (domestic waste pile) on the Island of Hawai'i. The bone was unearthed by archaeologists during the summer field seasons of 1968-1970. This area was first settled around 600 years ago.

1800's to 1900's

Seal hunting expeditions during the middle 19th century reduced the Hawaiian monk seal population to near extinction across the Hawaiian islands.

1891

Records show the first Hawaiian monk seal specimens were collected for science.

1905

The Hawaiian monk seal is given its scientific name, *Monachus schauinslandi*, after Dr. H. Schauinsland brought a seal skull back from Laysan Island, Northwestern Hawaiian Islands (NWHI).

1956

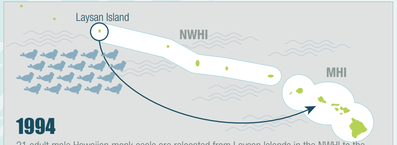
Scientists conduct the first systematic survey to count the number of Hawaiian monk seals.

1982

NOAA Fisheries begins collecting sighting data in the main Hawaiian Islands (MHI). Sightings are fairly sparse but consistent throughout the 1980s.

1990s

Hawaiian monk seal births and sightings in the MHI increase.



1994

21 adult male Hawaiian monk seals are relocated from Laysan Islands in the NWHI to the MHI because males greatly outnumbered females on Laysan, leading to a high level of male aggression with some males injuring and killing female seals. To prevent the further loss of females, it was necessary to remove some of the male seals from the island.

1995

National Geographic's "CRITTERCAM" investigations begin revealing new insights about foraging areas and feeding habits of the Hawaiian monk seal.

2007

The revised Hawaiian Monk Seal Recovery Plan describes the threats facing the species and recommended actions needed to address those threats.

2008

Lt. Governor Aiona signs into law legislation that establishes the Hawaiian monk seal as the official state mammal.

2010

Some Hawaiian monk seals in the MHI are fitted with new, high-tech cell phone tags that track their movements and also record dive depth, water temperature and salinity.

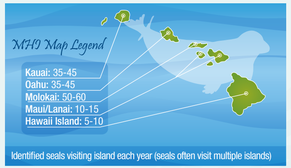
2011

Responding to a legal petition, NOAA Fisheries proposes expanding the Hawaiian monk seal's critical habitat in the NWHI and adding new areas in the MHI.

NOAA Fisheries Pacific Islands Region Recovering the Hawaiian Monk Seal

Growing population in the main Hawaiian Islands

A small and growing number of monk seals reside in the main Hawaiian Islands (MHI). At least 150 individual seals have been sighted here in recent years. However, despite the increase of animals in the MHI, the total population across their entire range, including the Northwestern Hawaiian Islands (NWHI), is in decline.

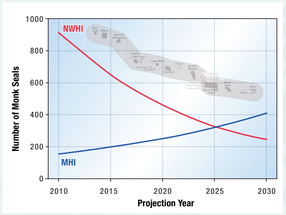


- The numbers of seal sightings and pups being born in the MHI have increased in recent years.
- Seals in the MHI are generally in better condition than seals in the NWHI.
- While MHI growth is promising for the population, it does not offset the decline in the NWHI and also poses new management concerns.

Northwestern Hawaiian Islands (NWHI)
- Larger population, but declining
- Most juveniles die before age 3

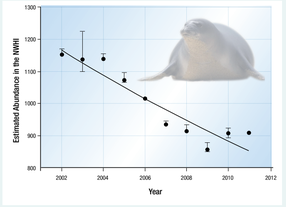
Main Hawaiian Islands (MHI)
- Smaller population, but growing
- Most juveniles thrive

Preliminary projections of Hawaiian monk seal population growth based on current information.



The Hawaiian Monk Seal is in Crisis

The monk seal population is currently declining at a rate of about 4% per year with around 1,100 remaining. At the current rate of decline, the monk seal population may fall below 1,000 animals within a few years.



Moving Toward Monk Seal Recovery

NOAA Fisheries uses innovative science and past experience with monk seal recovery efforts to develop management and recovery plans to recover the Hawaiian monk seal population. Current and future recovery plans are designed to comprehensively address both ecological threats and emerging management issues related to human-seal interactions in the MHI. Recovery activities include:

- Studying feeding habits to understand regional differences in juvenile survival
- Relocating weaned pups from areas of low survival/high predation risk to areas of higher survival
- Disentangling and dehooking seals, and removing marine debris
- Developing tools for modifying undesirable monk seal behavior related to seal interactions with humans and fishing gear
- Understanding potential impacts of climate change on the survival and recovery of monk seals in the future, including habitat loss, emerging diseases and changing food resources
- Community and stakeholder outreach and education programs

Recovery Plan Objectives:

- Investigate and mitigate factors affecting food limitation
- Prevent entanglements of monk seals
- Reduce shark predation on monk seals
- Minimize the risk of exposure to or spread of infectious disease
- Conserve Hawaiian monk seal habitat
- Reduce Hawaiian monk seal interactions with fisheries
- Reduce male aggression toward pups/immature seals and adult females
- Reduce the likelihood and impact of human interactions
- Investigate and develop response to biotoxin impacts
- Reduce impacts from compromised and grounded vessels
- Reduce the impacts of contaminants
- Continue population monitoring and research
- Create and implement a main Hawaiian Islands Hawaiian Monk Seal Management Plan