HISTORICAL TIMELINE OF THE HAWAIIAN MONK SEAL

Past to Present

Monk seals have occupied 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 should have historically served as monk seal habitat for millions of years.

~70 million years ago (mya)
A series of volcanic eruptions that formed the islands of the Hawaiian archipelago began.

~10-11.6 mya
Hawaiian monk seals as we know them today first appear in oceans.

~3.5-11.6 mya
Monk seals made their way to Hawaii, presumably through a previously existing open water passage between North and South America called the Central American Seaway.

~5.1 mya
The island of Kauai was formed.

~3 mya
Central American Seaway was closed by the Isthmus of Panama.

~A.D. 300-600
Polynesian settlers first arrived in Hawaii.

~A.D. 1,400-1,750
Hawaiian monk seal bones are buried in a Hawaiian midden (domestic waste pile) and later unearthed by researchers in the Lapakahi archeological site on the Island of Hawaii during the summer field seasons of 1968-1970. This area was first settled around 600 years ago.

1778
Captain James Cook, a British explorer, is the first European to arrive in the Hawaiian Islands.

1800's to 1900's
Sealing expeditions during the middle of the 19th century reduced the Hawaiian monk seal population to near extinction in the NWHI.

1857
King Kamehameha IV visited Nihoa in the Northwestern Hawaiian Islands (NWHI) and an excerpt from the Manuokawai log states, "At 10 AM went ashore. About a dozen seals were on shore..."

1891
Records show the first Hawaiian monk seal specimens were collected for science.

1900
Historical evidence records that a seal was caught in Hilo Bay, Island of Hawaii. Solitary seals were said to occur on the coast about once in 10 years or so.

1905
The Hawaiian monk seal is given its scientific name, *Monachus schauinslandi*, after Dr. H. Schauinsland brought a seal skull back from Laysan Island, NWHI.

1912
The U.S. revenue cutter "Thetis" returned from a cruise to Midway and Laysan Islands in the NWHI and brought back a seal skin which was presented to the Bishop Museum in Honolulu and parts of three others which are in the U.S. National Museum.

1951
A group of naturalists traveled amongst the islands of the Leeward chain (NWHI) on the yacht Pioneer on the George Vanderbilt Pacific Equatorial Expedition observing that the Hawaiian monk seal was found on all the Leeward Islands from French Frigate northward, reporting a total of 407 sightings.

1956
Scientists conducted the first systematic survey to count the number of Hawaiian monk seals.

1984
Nine adult males were relocated from Laysan Island (NWHI) to Johnston Atoll because of attacks on adult females and immature seals.

1994
21 adult male Hawaiian monk seals were relocated from Laysan Island in the NWHI to the MHI because males greatly outnumbered females on Laysan Island, creating an unbalanced population. Additionally, some males were 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 began, revealing new insights about foraging areas and feeding habits of the Hawaiian monk seal.

1998
Two adult males were relocated from French Frigate Shoals (NWHI) to Johnston Atoll because they were drowning pups.

2007
The Hawaiian Monk Seal Recovery Revised Plan was designed to describe the threats facing the species and the actions needed to address those threats.

2008
Lt. Governor Aiona signed into law legislation that establishes the Hawaiian monk seal as the official state mammal.

2009
NOAA Fisheries Service announced that it intends to revise the Hawaiian monk seal's critical habitat.

2010
Some Hawaiian monk seals in the main Hawaiian Islands (MHI) have recently been fitted with a new high tech cell phone tag that reveals their movements and also records water temperature and salinity.

FUTURE plans to conduct a translocation study to help increase the chance for juvenile seals to survive are currently being made. Pending regulatory approval, scientific validation and public engagement efforts to minimize potential adverse impacts some young seals may be temporarily moved from areas of low survivorship in the NWHI to areas of higher survivorship in the MHI to help avoid extinction of the species.

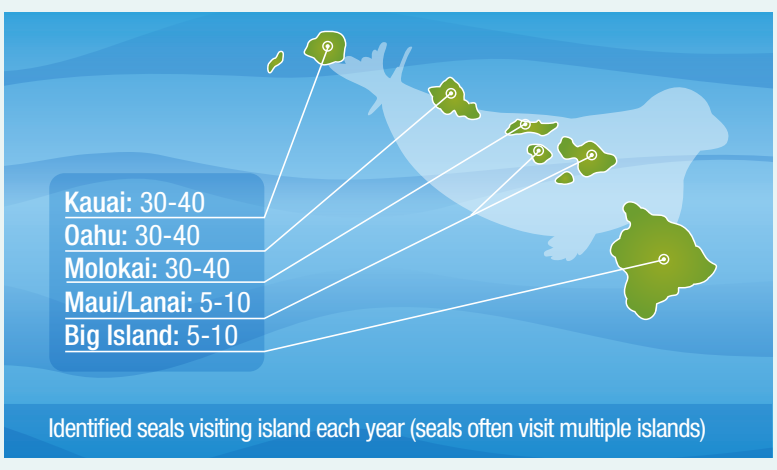





NOAA Fisheries Service Pacific Islands Region Recovering the Hawaiian Monk Seal

Growing population in the main Hawaiian Islands

A small and growing number of monk seals reside in the main Hawaiian Islands (MHI). Over 100 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.

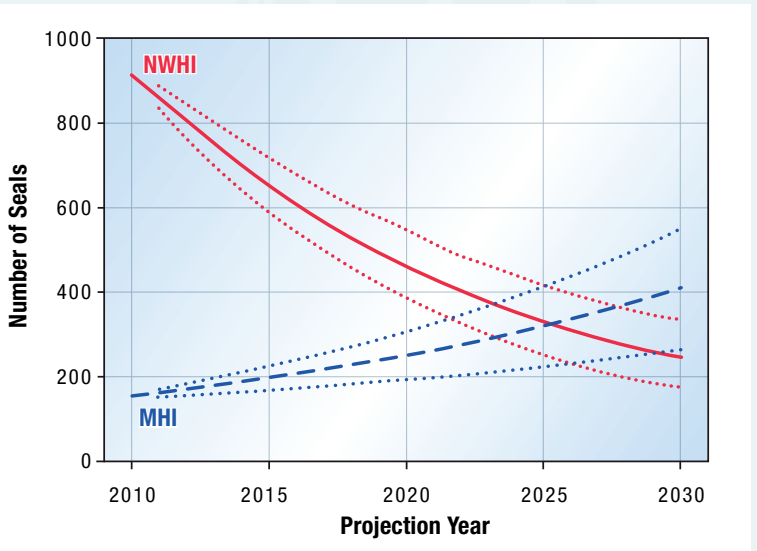


- The numbers of seal sightings and pups being born in the MHI are increasing each year
- Seals are generally in better condition than seals in the NWHI
- While growth is promising for the population it does not offset the decline in the NWHI and poses new risks and management concerns

NWHI (Northwestern Hawaiian Islands)
➢ Larger Population, but Declining
➢ Most Juveniles Perish

MHI (Main Hawaiian Islands)
➢ Smaller Population, but Growing
➢ Most Juveniles Thrive

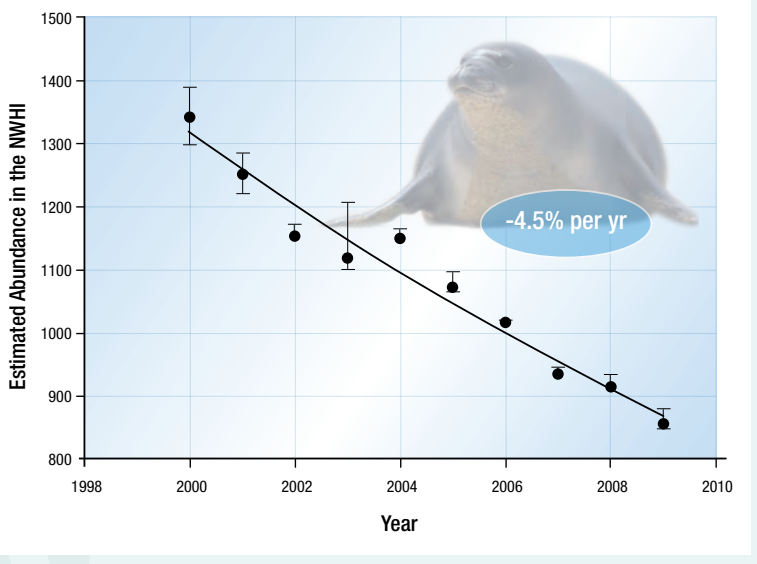
Preliminary projections of Hawaiian monk seal population growth based on current information.



At current rates, there may be as many seals in the MHI as NWHI in 2024.

The Hawaiian Monk Seal is in Crisis

- The NWHI population is currently declining at a rate of 4.5% per year
- Around 1,100 monk seals remain
- At current rate of decline, population may soon fall below 1,000 animals



Key Actions Required to Move Towards Recovery

- **Improve juvenile female survival in NWHI**
- **Ensure continued growth in MHI by engaging the public and reducing threats**
- **Maintain extensive field presence in NWHI**
- **Reduce probability of infectious disease introductions**

Juvenile Health Care Initiative
Develop a variety of tools to enhance survival of juvenile females, including the reduction of shark predation, relocation and supplemental feeding.

MHI Research Initiative
Understand biology, ecology and population dynamics of MHI seals and potential interactions with the human population.

Community-Based MHI Management Initiative
Enhance community participation in Hawaiian monk seal recovery activities through public education and outreach, and liaison and collaboration with native Hawaiians, fishers and other ocean stewardship partners.

Climate Change Initiative
Understand impacts of climate change on survival and recovery of monk seals in the future, including habitat loss and emerging diseases.

Recovery Plan Actions:

- 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