

Brochures

To help raise awareness of *Pseudorca* conservation and management issues within Hawai'i we have created and printed a brochure for the general public as well as a handout for kids with a word puzzle and map, and coloring pages and fact sheets for kids. These brochures are being distributed through the Hawaiian Islands Humpback Whale National Marine Sanctuary education programs as well as through other venues in Hawai'i. PDF copies of the brochure and handout (meant for printing double-sided) can be downloaded by clicking on the photos and/or the link above (or below). Left photo (c) Doug Perrine/SeaPics.com - all rights reserved. Center photo (c) Deron Verbeck/iamaquatic.com. If you are interested in printed copies of the brochure or handout for distribution please contact Robin Baird at [rwbaird \(at\) casadiaresearch.org](mailto:rwbaird@casadiaresearch.org)

HOW TO TELL THE DIFFERENCE: FALSE KILLER WHALES, SHORT-FINNED PILOT WHALES, PYGMY KILLER WHALES, AND MELON-HEADED WHALES IN HAWAII

There are four species of small black whales resident in Hawaiian waters, two relatively large (false killer whales, short-finned pilot whales) and two relatively small (pygmy killer whales, melon-headed whales). The four look fairly similar but can be discriminated based on relative dorsal fin size and position, head shape, and flipper shape, as well as other characteristics (summarized in table at the bottom). Photos are not to scale.

Prepared by Cascadia Research Collective, Olympia, WA. For more information see www.cascadiaresearch.org/hawaii.htm
To send photos contact Robin Baird or Sabre Mahaffy at hawaii@cascadiaresearch.org. Illustrations by Uko Gorter. Rev 30 Sep 16.



false killer whale



pygmy killer whale



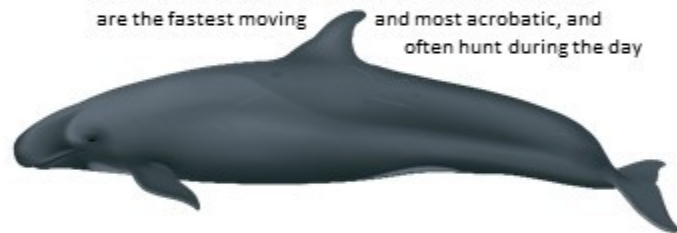
short-finned pilot whale



melon-headed whale

False killer whales (*Pseudorca crassidens*)

are the fastest moving and most acrobatic, and often hunt during the day



Short-finned pilot whales (*Globicephala macrorhynchus*)

have a dorsal fin that is larger and further forward on the back than other

Pygmy killer whales (*Feresa attenuata*)

have rounded tips to the flippers and a rounded head when viewed from above. They have a clear boundary to the cape and more white linear scars than melon-headed whales.



Melon-headed whales (*Peponocephala electra*)

ons are to scale

Where do the endangered **FALSE KILLER WHALES** spend their time?

HOW YOU CAN HELP

Be aware in high use areas –
they may target your catch and
approach your vessel

Change direction to avoid
interactions, such as moving
perpendicular to the animals'
swimming direction;
bring in lines

If you hook one, cut the gear
close to the animal to avoid
trailing line. Remove as much
of the gear as possible, safely.







(c) Daniel L. Webster

Where do the endangered **FALSE KILLER WHALES** spend their time?



0 25 50 75 100 Miles

-  Every day
-  Several days a week
-  Every week (approximately)
-  Once a month (approximately)

Note: Blocks are state commercial fishing grids
Whale presence from Cascadia Research satellite tag data

KAMAAINA OHANA
False Killer Whales in MHI

In 2012 MHI Insular False Killer Whales (IFKW) were listed as endangered under the Endangered Species Act. The current

Reflective decal dev
loped in partnership with NOAA

Available from NOAA and DAR

Why Do Marine Mammals Strand?

- Sick or diseased
- Entangled in fishing gear
- Habitat degradation
- Environmental change
- Ingestion of marine debris



Fish hooks and marine debris (above) were found



A stranding is a dead, sick, or injured marine mammal found on beaches, floating at sea, or out of its normal habitat.

REPORT a stranding as soon as possible. Call the Marine Animal Emergency Hotline:

1-888-256-9840

For more information, email whaledolphinstranding@gmail.com

All marine mammals are protected under the Marine Mammal Protection Act of 1972.

Mahalo to the Hawai'i Tourism Authority and Hawai'i Community

Stranding Trifold Brochure - Outside (card-sized)

Endangered False Killer Whales in Hawai'i

Scientific Name: *Pseudorca crassidens*



- Three populations live in Hawaiian waters: offshore pelagic, Northwestern Hawaiian Islands, and main Hawaiian Islands (MHI) insular
- Listed as endangered in 2012, the MHI population is less than 200
- Common name comes from its skull being similar to a killer whale's

If You See a Stranded Whale or Dolphin:

1. Call the marine animal emergency hotline:



1-888-256-9840

2. Do not attempt to approach, touch, or feed the animal
3. Determine the animal's exact location to aid the first responders arriving on site
4. Take photos for use in the animal's stranding report

It is illegal for unauthorized

Stranding Trifold Brochure - Inside (card-sized)

Have you seen Hawai'i's False Killer Whales? An Endangered Species

IT'S OKAY TO CALL

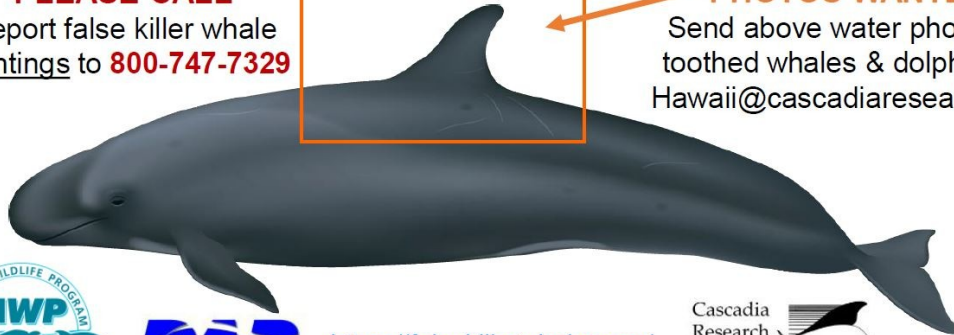
Report Marine Animal Emergencies: **888-256-9840**

PLEASE CALL

Report false killer whale sightings to **800-747-7329**

PHOTOS WANTED

Send above water photos of toothed whales & dolphins to Hawaii@cascadiaresearch.org



<https://falsekillerwhales.org/>



IFKW Sticker - 3" x 6"

Have you seen Hawai'i's False Killer Whales? An Endangered Species

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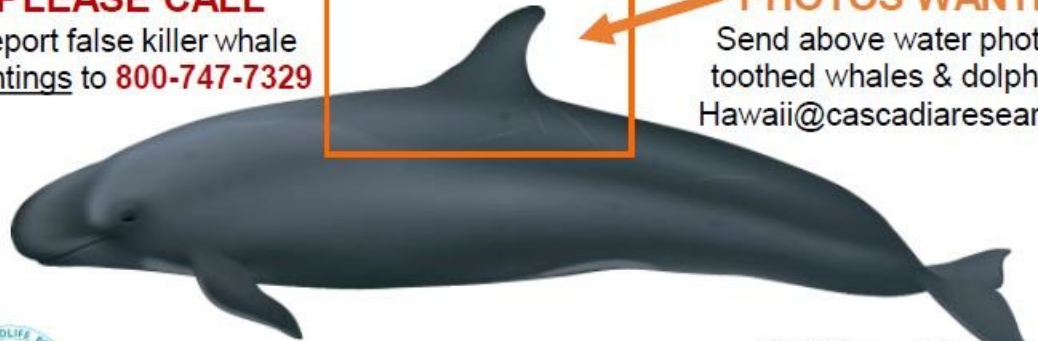
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IFKW Sticker/Magnet/Card -

2" x 3.5"

Pseudorca



Hawai'i's False Killer Whales

False Killer Whales of Hawai'i

Kaua'i, Ni'ihau, & The Northwestern Hawaiian Islands Individuals



HIPc325 Sighted 2008-2010



HIPc327 Sighted 2008-2010



HIPc417 Sighted 2010-2012



HIPc428 Sighted 2010



HIPc520 Sighted 2012-2013



HIPc522 Sighted 2012-2013



HIPc523 Sighted 2012-2013



HIPc533 Sighted 2012

Pseudorca of Kaua'i, Ni'ihau, & The Northwestern Hawaiian Islands

The Hawaiian Islands are home to three distinct populations of false killer whales (*Pseudorca crassidens*). The endangered main Hawaiian Islands population ranges from Ni'ihau to Hawaii Island. The offshore population use the open ocean and only occasionally comes near the islands. In 2010 a previously unknown and genetically distinct population of *Pseudorca* was discovered that inhabits the waters around the Northwestern Hawaiian Islands and overlaps with the main Hawaiian Islands population around Kaua'i and Ni'ihau.

Home Waters

Map (right) showing the trackline of a false killer whale satellite tagged off Kaua'i on June 13th, 2012, over a 42-day period through July 25th, 2012.

Map (inset) showing locations of a false killer whale satellite tagged off Kaua'i on July 26, 2013, over a 20-day period. This individual was with some of the same individuals that were satellite tagged in June 2012.



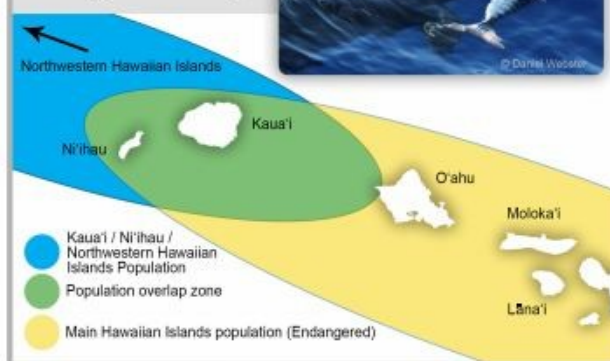
Do you have photos
or videos
of Hawai'i's
false killer whales?

Photo contributions are valuable for scientific research - they are what helped discover this unique population!

Please contact Robin Baird
rwbaird@cascadiaresearch.org

Cascadia
Research
Collective
non-profit research and education since 1976

Range Overlap



Endangered False Killer Whales of Hawai'i

Common Cluster 3 Individuals



HIPc301 - Subadult Male, Sighted 2008-2014



HIPc166 - Adult Female, Sighted 2003-2010



HIPc170 - Adult Female, Sighted 2003-2014



HIPc177 - Adult Female, Sighted 2003-2012



HIPc186 - Adult Female, Sighted 2004-2014



HIPc189 - Sex Unknown, Sighted 2004-2015



HIPc200 - Adult Male, Sighted 2004-2010



HIPc299 - Sex Unknown, Sighted 2008-2009

Interesting Facts About... Hawai'i's False Killer Whales



Pseudorca cooperatively hunt and share their prey, often passing it back and forth many times before starting to consume it. They have even been known to share their catch with human swimmers and people in boats. Since *Pseudorca* feed during the day on large fish and commonly bring them to the surface, more is known about their diet than any other whale or dolphin in Hawai'i.

An Endangered Species

In 2012 the main Hawaiian Islands insular population of *Pseudorca* was listed as **endangered** under the U.S Endangered Species Act. This came after a year-long review by a National Marine Fisheries Service team which found that the whales constitute a 'distinct population segment' that is in danger of extinction. In 2010 NMFS also established a Take Reduction Team to reduce by-catch of false killer whales in the Hawai'i-based long-line fishery, and a Take Reduction Plan was implemented in 2013 requiring use of weak circle hooks in the long-line fishery to reduce serious injury and mortalities.



Did you know?

False killer whales were given the name *Pseudorca* because of similarities to killer whales in skull and teeth.

False Killer Whales are known to breach frequently. Here one takes to the air in pursuit of its Mahimahi prey

Pseudorca Size Comparisons



Got *Pseudorca* Today?



Your pictures and videos are very important for research purposes!

Please Contact Robin Baird:

rwbaird@cascadiaresearch.org

Things You Can Do To Help *Pseudorca*

- Tell everyone you know about Hawai'i's *Pseudorca*
- Only eat sustainably caught fish
- Don't use pesticides or other household toxic chemicals
- If you fish, use weak circle hooks

For more information visit: www.cascadiaresearch.org/Hawaii/falsekillerwhale.htm

Endangered False Killer Whales of Hawai'i

Common Cluster 2 Individuals



HIPc150 -Adult Male, sighted 2002-2016



HIPc196 -Adult Male, sighted 2004-2016



HIPc197 -Adult Male, sighted 1986-2011



HIPc230 -Adult Female, sighted 1987-2016



HIPc231 -Adult Female, sighted 2005-2016



HIPc339 -Adult Female, sighted 2005-2011



HIPc378 -Adult, sighted 2010-2016



HIPc398 -Adult Female, sighted 2006-2011

Pseudorca



© Deron Verbeek

Hawai'i's False Killer Whales

How Scientists Learn About *Pseudorca* in Hawai'i

Sightings

Every year several research cruises are undertaken throughout the main Hawaiian Islands. Scientists observe many species of whales and dolphins including false killer whales and record information on feeding habits and behavior.

Photo-Identification

When *Pseudorca* are encountered photographs are taken of the dorsal fins. We match the photos with those in a long-term photo-identification catalog, creating a record of individual sightings that can be used to estimate population size and examine social organization and movements.

Tracking

Along with photo-ID, satellite tags are being used to understand movements and habitat use. This map shows 10 days of movements of HIPc200, a sub-adult male first documented in December 2004, tagged off O'ahu in October 2010.

With Your Help



©Deron Verbeek

See any *Pseudorca* Today?

Photos and videos of your encounters can be extremely valuable for research purposes!

Please contact Robin Baird at:
rbaird@cascadiaresearch.org

Cascadia
Research
Collective
non-profit research and education since 1979

For more information visit: www.cascadiaresearch.org/hawaii/falsekillerwhale.htm

Pseudorca



Hawai'i's False Killer Whale

Produced by Cascadia Research Collective with thanks to Jeff Hogan/Killer Whale Tales and Joe D'ugo.
Inside illustration Uko Gortas. Photos Main - Deron Verbeed/tama-quebec.com. Insets Dan J. McQueen/eyrWild
Whale Research Foundation (bottom right, upper left, middle left),
Robin W. Baird/Cascadia Research (bottom left).

Copies can be downloaded from www.cascadiaresearch.org/hawaii/falsekillerwhale.htm