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Pseudorca crassidens

false killer whale

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By Kevin Hatton

Geographic Range

Pseudorca crassidens is found throughout the Atlantic, Pacific, and Indian Oceans. It is nearly cosmopolitan, occurring at latitudes as far north as 50 degrees north and as far south as 52 degrees south.

This species has been observed as far south as New Zealand, Peru, Argentina, South Africa, and the north Indian Ocean. They also range from Australia, the Indo-Malayan Archipelago, Philippines, and north to the Yellow Sea. They have been observed in the Sea of Japan, coastal British Columbia, coastal Maryland (USA), the Bay of Biscay, and have been discovered in the Red and Mediterranean Seas. Many pods live near the Gulf of Mexico and surrounding the Hawaiian Islands. (Shirihai and Jarrett, 2006)

Kingdom: [Animalia](#)
 Phylum: [Chordata](#)
 Subphylum: [Vertebrata](#)
 Class: [Mammalia](#)
 Order: [Cetacea](#)
 Suborder: [Odontoceti](#)
 Family: [Delphinidae](#)
 Genus: [Pseudorca](#)
 Species: ***Pseudorca crassidens***

Biogeographic Regions:

indian ocean (native ); atlantic ocean (native ); pacific ocean (native ); mediterranean sea (native .

Other Geographic Terms:

cosmopolitan .

Habitat

False killer whales are common in tropical or temperate seas. They visit coastal waters but prefer to remain in deeper waters. They are known to dive as deep as 2000 meters. (Shirihai and Jarrett, 2006; Watson, 1981)

Depth
 2000 m (high); avg. 500 m
 (6560 ft; avg. 1640 ft)

These animals are found in the following types of habitat:

temperate ; tropical ; saltwater or marine .

Aquatic Biomes:pelagic ; coastal **Physical Description**

False killer whales are black or dark gray with a white blaze on their ventral side. Some have a paler gray coloring on their head and sides. Their heads are rounded and often described as blunt and conical with a melon-shaped forehead. Their bodies are elongated. The dorsal fin is sickle-shaped and protrudes from the middle of their back, the pectoral flippers are pointed. They have a slight overbite--the upper jaw extends beyond the lower jaw. This gives them a slight beaked look to their rostrum. No subspecies have been described.

Mass916.26 to 1841.59 kg
(2015.77 to 4051.5 lbs)**Length**3.50 to 6.10 m
(11.48 to 20.01 ft)

Adult males range from 3.7 to 6.1 m in length, while adult females range from 3.5 to 5 m. Adults may weigh 917 to 1842 kg. Newborns range from 1.5 to 1.9 m in length and weigh about 80 kg. The dorsal fin can grow to be 18 to 40 cm high. This species has a more slender build compared to other dolphins and they have tapering heads and flippers. Their flippers average about one-tenth of the head and body length and have a distinct hump on the leading margin of the fin. There is a definite median notch on their flukes and they are very thin with pointed tips. False killer whales also have 8 to 11 teeth on each side of their jaw.

The skulls of females range in length from 55 to 59 cm, while males are 58 to 65 cm. They have 47 to 52 vertebrae: 7 cervical, 10 thoracic, 11 lumbar, and 20 to 23 caudal vertebrae. They have 10 pairs of ribs. Their manus consists of 6 carpals, 5 metacarpals, and 14 phalanges.

This species is often mistaken for bottlenose dolphins (*Tursiops truncatus*), short-finned pilot whales (*Globicephala macrorhynchus*), or long-finned pilot whales (*Globicephala melas*) as they inhabit the same regions. To distinguish these species, bottlenose dolphins have beaks, and pilot whales are larger with obvious dorsal fin differences. ("Review on Small Cetaceans: Distribution et al., 2005; Liebig, Flessa, and Taylor, 2007; Minasian et al., 1984; Nowak, 1999; Shirihai and Jarrett, 2006)






Some key physical features:endothermic ; homoiothermic; bilateral symmetry **Sexual dimorphism:**  male larger, sexes shaped differently.**Reproduction**

Although false killer whales breed year-round, their breeding peaks in late winter to early spring. Studies suggest they are polygynandrous. (Nowak, 1999; Shirihai and Jarrett, 2006)

Mating systems:polygynandrous (promiscuous) 

False killer whales will only have one calf per pregnancy and she carries that calf for 11 to 15.5 months. The calf stays with the mother for 18 to 24 months. Between 18 and 24 months old, the calf is gradually weaned. Sexual maturity occurs in females between 8 and 11 years of age and in males at 8 to 10 years.

In this species and a few others in the family Didelphinidae, if the female doesn't conceive after the first ovulation, she will keep ovulating until she does conceive. After giving birth, the female will not breed again for an average of 6.9 years. (Perrin, Würsig, and Thewissen, 2002; Shirihai and Jarrett, 2006; Slijper, 1962)

Key reproductive features:iteroparous ; year-round breeding ; gonochoric/gonochoristic/dioecious (sexes separate); sexual ; induced ovulation ; viviparous **Breeding interval**

Females give birth every 6.9 years, on average.

Breeding season

Breeding occurs year-round, but peaks December to January and again in March.

Number of offspring

1 (high); avg. 1

Gestation period

11 to 15.50 months

Time to weaning

18 to 24 months

Age at sexual or reproductive maturity (female)


8 to 11 years

Age at sexual or reproductive maturity (male)

After false killer whales calves are born, they are cared for and nursed by their mother for up to 24 months. Young are capable of swimming on their own shortly after birth. Young are likely to remain in the same social group with their mother beyond weaning. (Nowak, 1999; Slijper, 1962)

8 to 10 years

Parental investment:

precocial ; pre-fertilization (provisioning, protecting: female); pre-hatching/birth (provisioning: female, protecting: female); pre-weaning/fledging (provisioning: female, protecting: female); post-independence association with parents; extended period of juvenile learning.

Lifespan/Longevity

Researchers estimate that males live an average of 57.5 years and females live an average of 62.5 years in the wild. No known age-dependent mortality rate has been discovered. Because few false killer whales are kept in captivity, captive lifespans are unknown. (Shirihai and Jarrett, 2006; Stacey, Leatherwood, and Baird, 1994)

Average lifespan (wild)
60 years

Behavior

False killer whales are found in groups ranging from just a few individuals to hundreds of individuals. In these large groups they are sometimes separated into smaller groups or pods, which average about 18 members (typically 10 to 30). Pods consist of all ages and both sexes.

False killer whales often "strand" themselves in large numbers. Large strandings have been reported on beaches in Scotland, Ceylon, Zanzibar and along the coasts of Britain. It is thought that stranded groups might have been chasing groups of seals or sea lions into the shallower waters and became stuck.

It has been said that false killer whales are as social as pilot whales (*Globicephala*). They ride in the wakes and bow waves of ships. They prefer faster-moving ships, but will ride the bow waves on any vessel. They are one of the few large mammals that leap out of the water over the wake of the ship, which is a useful identification attribute. (Liebig, Flessa, and Taylor, 2007; Perrin, Würsig, and Thewissen, 2002; Shirihai and Jarrett, 2006; Slijper, 1962; Watson, 1981)

Home Range

This species is not restricted to known home ranges.



Key behaviors:

natatorial ; motile ; nomadic ; social ; colonial .

Communication and Perception

Pseudorca crassidens use echolocation primarily in the frequency range of 20 to 60 kHz. They also use higher frequencies of 100 to 130 kHz. False killer whales, like other [toothed whales](#) also use other sounds, such as whistles, squeals, or less distinct pulsating sounds. It has been noted that whenever researchers get close to a group of false killer whales, they have been able to detect the whales' piercing whistles from about 200 meters away. James Porter notes, "The noises were astonishingly diverse, much more varied than the sounds of human speech, both in pitch and intensity. Each whale seemed to be making different sounds. The cacophony gave the impression that whatever they were 'saying', they were not all 'saying' the same thing at the same time (Watson 1981)." (Perrin, Würsig, and Thewissen, 2002; Watson, 1981)

Communicates with:

tactile ; acoustic .

Perception channels:

visual ; tactile ; acoustic ; ultrasound ; echolocation ; chemical .

Food Habits

False killer whales are carnivores, eating primarily fish and squid. They mainly eat squid (*Loligo*) but also opportunistically take fish and occasional marine mammals, such as seals (*Phocidae*) or sea lions (*Otariidae*). Some of the fish they eat include salmon (*Oncorhynchus*), squid (*Loligo*, *Berryteuthis magister*, or *Gonatopsis borealis*), sciaenid and carangid fishes, bonito (*Sarda lineolata*), mahi mahi (*Coryphaena hippurus*), yellowfin tuna (*Thunnus albacares*), yellowtail (*Pseudosciana manchurica*), and perch (*Lateolabrax japonicus*). On one occasion researchers found the remains of a humpback whale *Megaptera noveangliae* in the stomach of a false killer whale.

This species moves quickly in order to catch fish. They have been observed catching a fish in their mouth while completely breaching the waters' surface. They have also been seen shaking their prey until the head and entrails are shaken off. They then peel the fish using their teeth and discard all the skin before eating the remains. Some mothers will hold a fish in the mouth and allow their calf to feed on the fish. This food manipulation is rare in cetaceans. ("Review on Small Cetaceans: Distribution et al., 2005; Perrin, Würsig, and Thewissen, 2002; Watson, 1981)

Primary Diet:

carnivore  (piscivore , molluscivore .

Animal Foods:

mammals; fish; mollusks; other marine invertebrates.

Predation

Due to their harmful effects on fisheries, humans kill false killer whales. In some regions in the eastern tropical Pacific, they are hunted for meat. (Nowak, 1999; Slijper, 1962)

Known predators

- humans (*Homo sapiens*)

Ecosystem Roles

False killer whales are predators of fish and squid (*Loligo duvaucelii*), and they also eat smaller delphinids and pinnipeds (e.g., seals [*Phocidae*], and sea lions [*Otariidae*]).

One protozoan that is found in false killer whales are the parasites *Bolbosoma capitatum*. They are also carriers of two types of whale lice: *Lsocyamus delphini* and *Cyamus antarcticensis*. (Perrin, Würsig, and Thewissen, 2002)

Commensal or parasitic species (or larger taxonomic groups) that use this species as a host

- Lsocyamus delphini*
- Cyamus antarcticensis*
- Bolbosoma capitatum*

Economic Importance for Humans: Negative

These whales will eat fish off of fishing lines and out of nets of commercial fishing operations. (Nowak, 1999; Perrin, Würsig, and Thewissen, 2002)

Economic Importance for Humans: Positive

In the eastern tropical Pacific, *Pseudorca crassidens* is taken for food and also to limit their consumption of tuna *Osteoglossiformes* and inhibit their competition with commercial fisheries. (Nowak, 1999)

Ways that people benefit from these animals:

food .

Conservation Status

Although false killer whales are hunted by humans and there are annual mass strandings, populations are considered stable. There are only a few countries that hunt them for food or remove them as threats to the fisheries industry. (Nowak, 1999)

IUCN Red List: [\[link\]](#):

Lower Risk - Least Concern.

Other Comments

This species was thought to be extinct until approximately 50 years ago, because only skulls and other bones washed ashore. (Shirihai and Jarrett, 2006)

Contributors

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Appendix II.

State of Michigan List:

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