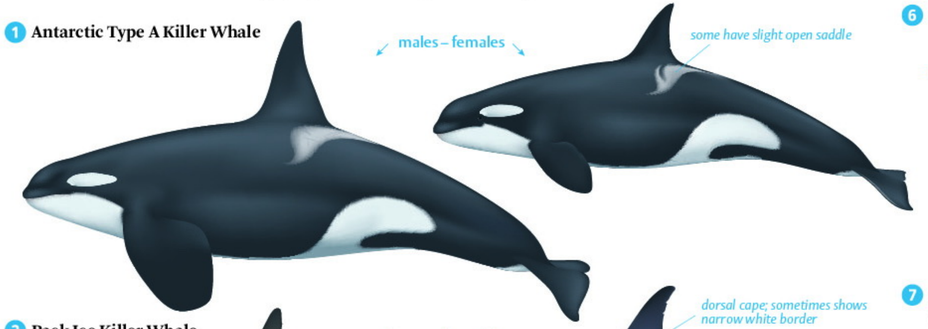
Orcinus orca KILLER WHALES *Ecotypes & Forms*

A diversified portfolio

SOUTHERN HEMISPHERE

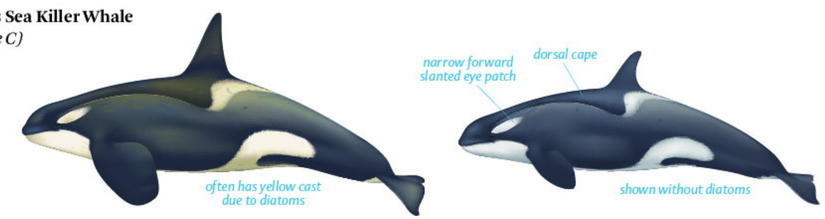
1 Antarctic Type A Killer Whale



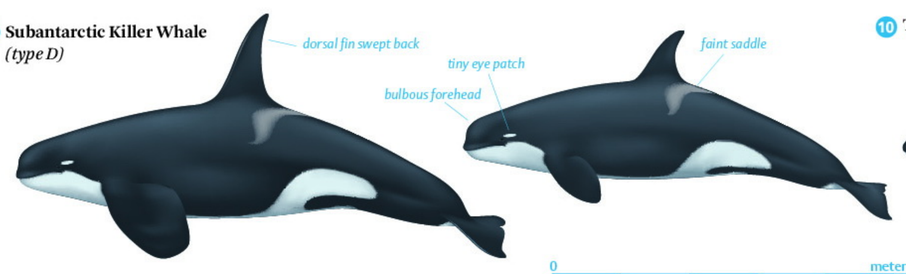
2 Pack Ice Killer Whale
(large type B)

3 Gerlache Killer Whale
(small type B)

4 Ross Sea Killer Whale
(type C)



5 Subantarctic Killer Whale
(type D)



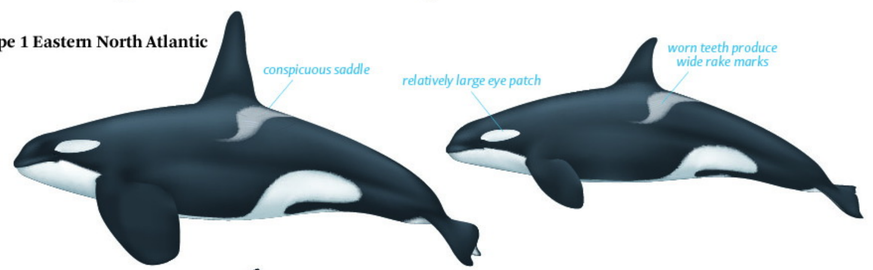
NORTHERN HEMISPHERE

6 Resident Killer Whale

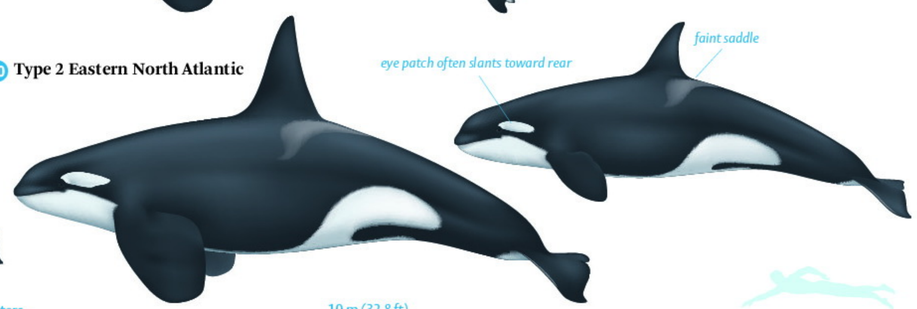
7 Bigg's Killer Whale
(transient)

8 Offshore Killer Whale

9 Type 1 Eastern North Atlantic



10 Type 2 Eastern North Atlantic



0 meters 10 m (32.8 ft)

1

A large (perhaps to 9.5 m/31 ft.), black and white form; it migrates to Antarctica during the austral (southern) summer where it forages in open (ice free) waters and feeds mainly on minke whales and occasionally elephant seals. During the winter, it probably migrates to lower latitudes, perhaps to the tropics.

2

A large, two-toned gray and white form with dark cape pattern and very large eye patch. Often has yellowish cast due to diatoms. Circumpolar, it forages mainly in loose pack ice where it preys on ice seals (prefers Weddell seals), which groups wave-wash off ice floes by creating waves with their tails; occasionally takes minke whales.

3

A medium-sized, two-toned gray and white form with a dark cape pattern and large white eye patch. Often appears yellowish due to diatom infestation. Common around Antarctic Peninsula, especially in the Gerlache Strait. Preferred prey unknown but has been seen feeding on penguins on numerous occasions.

4

The smallest killer whale known – adult males reach only 6 m (20 ft). A two-toned gray and white form with a dark gray cape; often colored yellowish by diatom film. Eye patch is distinctively narrow and slanted. Occurs deep in the pack ice in eastern Antarctica and feeds on fish; especially common in the Ross Sea.

5

Recently described form, known from perhaps a dozen sightings. Easily recognized by its tiny eye patch (all ages); head is rounded, dorsal fin often swept back and pointy. Distribution circumglobal in subantarctic waters (north of 60°S); sometimes associated with islands. Preferred prey unknown but reportedly steals fish off longlines.

6

The best-known killer whale. A medium-large (to 7.2 m), black and white form that lives in coastal waters of the North Pacific. Saddle patch often has a large black intrusion ('open' saddle) not found in other killer whales. A fish-specialist – some populations feed almost exclusively on salmon. Females may live to 80-90 years.

7

A large (perhaps 8 m), black and white form – similar to resident killer whale except it lacks an open saddle. Occurs in coastal and offshore waters of the North Pacific. A mammal-eater, it feeds mostly on harbor seals and minke whales but will also take sea lions, otters, calves of large whales, etc. Named after pioneer killer whale researcher - Michael Bigg.

8

A smaller form (to 6.7 m) rarely observed because it occurs mainly over outer continental shelf of eastern North Pacific. Group size usually large (100-200); ranges widely: some groups travel between Alaska and southern California. Apparently feeds extensively on sharks and teeth are often worn to gum line due to rough skin of sharks.

9

A smaller (to 6.6 m), black and white form, currently known only from the North Atlantic. Off Norway, feeds on herring and mackerel, which are cooperatively herded into dense schools; some individuals have also been seen to take seals. Teeth of this form are often worn smooth to the gum line – perhaps from feeding on sharks also.

10

A large (to 8.5 m), black and white form (only recently recognized), but with a distinctive back-sloping white eye patch. Few recorded observations, but currently known only from the North Atlantic where it is known to prey on other cetaceans, especially minke whales.

The killer whale (*Orcinus orca*) occurs in all the world's oceans where it is *the* top marine predator and perhaps the most widespread vertebrate on earth. Although currently considered to be a single, worldwide species, recent research has revealed that there are at least 10 recognizable forms (or ecotypes) of killer whales, which are shown here drawn to scale. For the most part, these forms have different prey preferences, distributions, social structures, foraging behaviors, acoustics, physical features, and genetics. This has led some researchers to suggest that there is more than one species of killer whale, and perhaps several. Our research seeks to understand the taxonomy and role of these predators in marine ecosystems.

http://swfsc.noaa.gov/prd-killerwhale/

Illustration and design: Uko Gorter (www.ukogorter.com) **Text:** R. L. Pitman, *Southwest Fisheries Science Center, NOAA Fisheries Service*, Robert.Pitman@noaa.gov **Photo credits:** R.L. Pitman (1,2,4,7); John Durban (3,6); Paul Tixier (5); Paul Wade (8); Andy Foote (9); Lewis Drysdale (10)