



THE NATURAL HISTORY OF THE GRAY WHALE

Eschrichtius Robustus (E. Robustus)

A Presentation by Norma Jellison (Whale Watch)

Eastern Pacific Gray Whale

- Mammal
 - Cetacean (Whales, Dolphins, Porpoises)
 - Mysticeti (Baleen Whale)
- Coastal Whale – visible from shore
- Migrates along North American Pacific Coast; between Arctic seas and lagoons of Baja California, Mexico

Identification

- Streamlined Body – Narrow tapered head
- Gray Mottled Skin
- No Dorsal (top) Fin
- Dorsal Hump w/ 6-12 knuckles
- Flippers – small paddle-shaped
- Fluke (tail) 10-12' across pointed at tips; deep center notch



- Size
 - Adult Males 45-46'
 - Adult females up to 50/55'
 - Calves 12-15'
- Weight
 - Adults – up to 45 Tons (average 35T)
 - Calves 1500 – 2000 lbs at birth
- Population
 - Approx 20,000

Lifecycle

- Sexual Maturity: 5 to 11 years or 36-39'
- Gestation: 12-13 months
- Calving Interval: 2 or more years
- Calves Nurse: 7-8 months > 50 gallons/day
- Milk: 53% Fat (human milk 2% fat; 15x fat of cow's milk)

Life Cycle

- Breeds on southbound migration mostly in So CA waters and in Pacific lagoons of Baja: Ojo de Libre, Laguna San Ignacio, Bahia Magdalena
- Calves mostly in Baja lagoons/some in So CA waters
- Feeds
 - Mostly in Alaska (Chucki, Beaufort, N Bering Seas) +/- 5 months until ice forms
 - Opportunistic feeders during migration
 - Pacific Coast Feeding Group (PCFG) +/- 200 summer/feed between Kodiak Island and No CA

Migration

- 10,000-14,000 mi (average 12,000 mi) round trip
one of longest of all mammalian migrations
- Southbound – October (ice up) 2-3 months (October – February) on horizon generally using California Current
- Lagoon Time – 2-3 months average (December – April)
- Northbound – 2-3 months (February – July)
 - close to shore uses Davidson Current
 - Newly Pregnant Females first (mid Feb from Bodega Head)
 - Males; Immature Males and Females
 - Cows/Calves last (April – June; peak May) closest to shore calf still nursing; needs to rest

Summer Feeding Grounds

May - October

Pacific gray whales feed from late spring to early fall when ice melts and clears the way to abundant feeding waters in the Bering, Chukchi, and Beaufort Seas. The whales must gain the fat they'll need to sustain them for the roundtrip migration before the next feeding season.

Migration Route

The whales usually travel within 2.5 miles of shore along 5,000-7,000 miles of coastline. Their nearshore route makes this one of the few whale migrations that we can see from shore.

Winter Birthing and Mating Grounds

December - April

The warm, shallow waters in the lagoons of Mexico's Baja Peninsula are home to mothers and babies in winter. Many other gray whales are seen along the coast of Baja and off the mainland of Mexico. ★ Designates nursery lagoon.

Fall Migration

October - February

Southward migration is led by pregnant females, in a hurry to reach the warm birthing and nursery lagoons. Soon to follow are the males and other adult females. Juveniles join the parade, but some don't even reach Mexico before turning around and heading north.

Spring Migration

January - June

Northward migration occurs in pulses or waves. First to head north are adult males and juveniles, and newly pregnant females. Mothers and babies stay in the lagoons a month or two longer than the others so babies can gain blubber and strength before making the long journey north.

Pacific Gray Whale

- Speed: 3-5 mph
- Breathing Pattern:
 - blows 3-5 times in 15-30 second intervals
 - followed by dive when submerged 2-5 minutes
 - can stay submerged up to 15 minutes
- Blow:
 - Bushy; heart shaped



Diet

- Amphipods that live in sediment of shallow, cold Arctic seas (also bottom dwelling ghost shrimp)
- Eats about a ton/day during 24 hour daylight period (estimated 67 Tons during 5 months on feeding grounds)
- Stored as blubber; lives off blubber stores during migration south and back north



Barnacles and Lice

Barnacles - *Cryptolepas rhachianecti* – only found on Gray Whales and live out life cycle on the whale

Lice – 3 kinds of lice (Amphipods) -2 only on Gray Whale:

- *Cyamus scammoni* and *Cyamus kessleri*
- *Cyamus ceti* found on other cetaceans



Feeding

- Baleen: Upper jaw only ; 130-180 plates on either side of jaw; 2-10"; up to 20" long (keratin)
- Sucks in mud/water; pushes through baleen with tongue; amphipods caught in bushy hairs of baleen; whale licks off and swallows
- Most whales are right sided
- 7 ft "craters" in mud = size of whale's head



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