

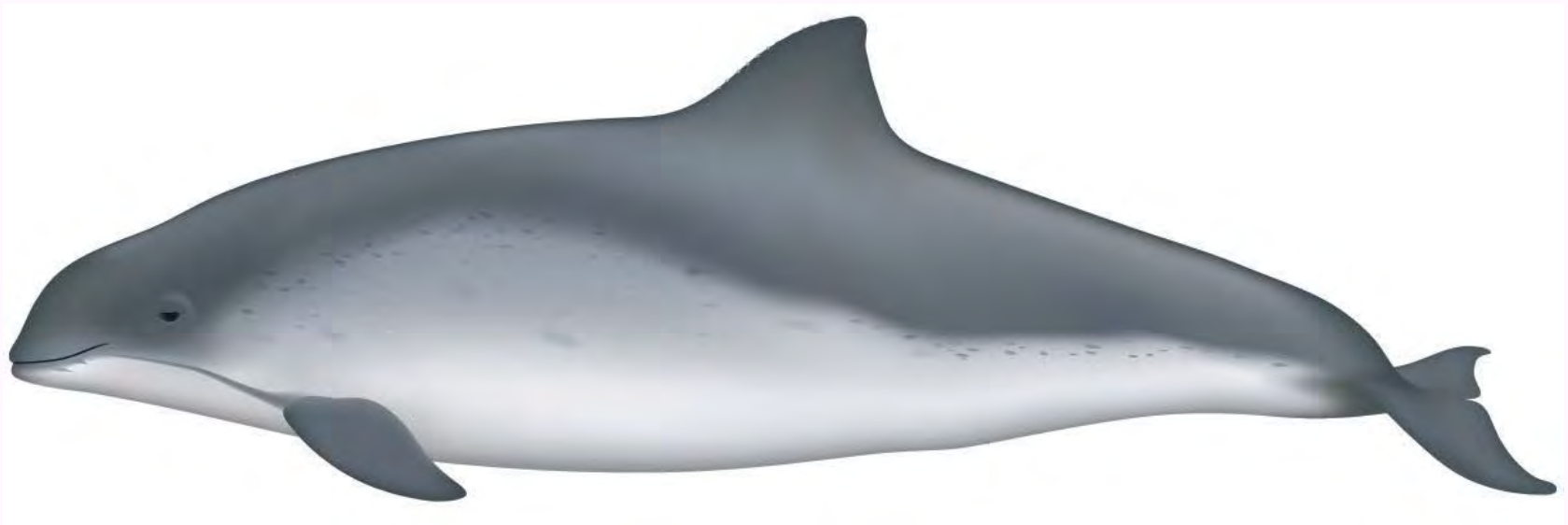


# Harbor Porpoises of the San Francisco Bay

by

GOLDEN GATE CETACEAN RESEARCH

William Keener, Izzy Szczepaniack, Jonathan Stern, Ph.D, Marc Webber



Courtesy of Uko Gorter

**Harbor  
Porpoise**  
(*Phocoena phocoena*)

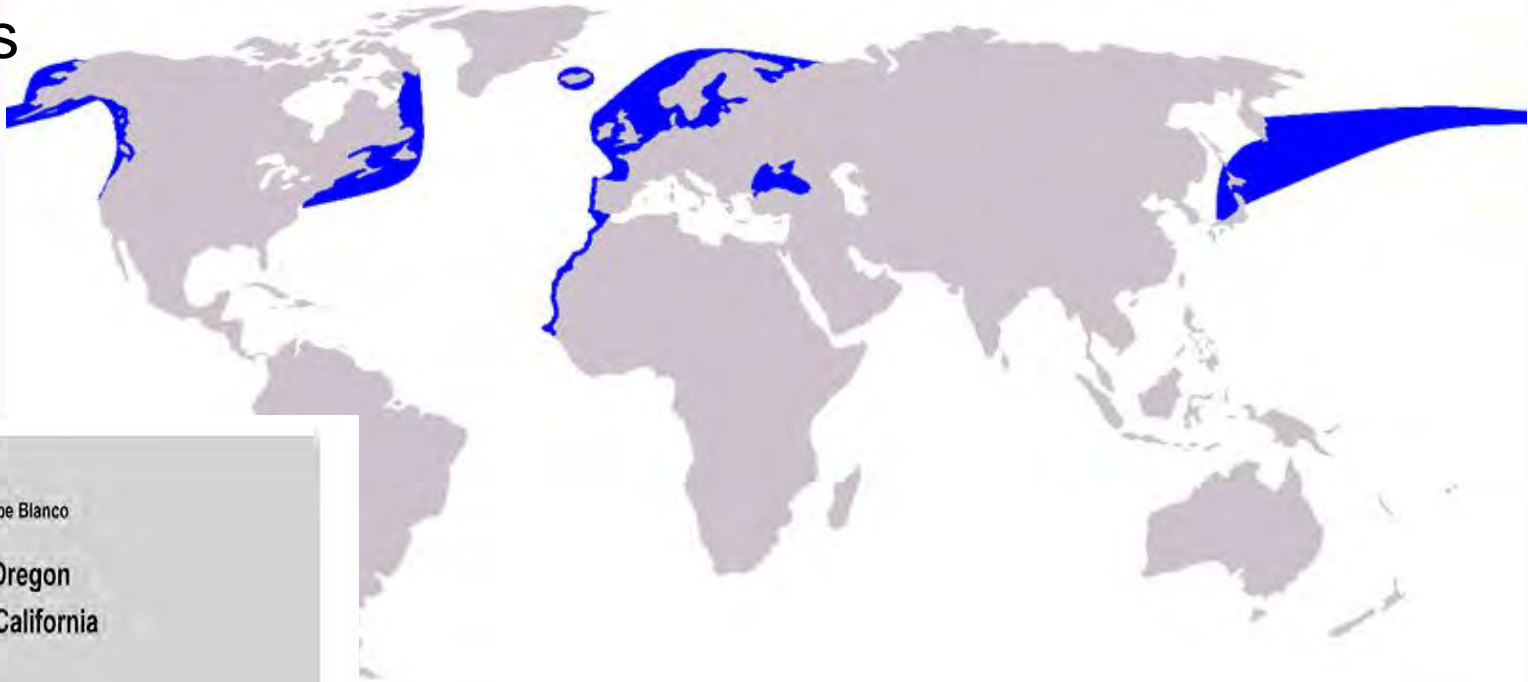
length: 5 ft

weight: 100-150 lbs

avg. lifespan: 10-12

yrs

# Harbor Porpoise range maps



<b>N.E. Pacific Stocks</b>	<b>Pop. Estimate</b>
Bering Sea	66,078
Gulf of Alaska	41,854
Inland WA	10,682
Monterey Bay	1,613
Morro Bay	1,656
Nor. California-Sou. Oregon	17,763
Oregon-Washington Coastal	37,745
<b>San Francisco-Russian River</b>	<b>9,189</b>
Southeast Alaska	17,076

# Harbor Porpoise History

< 1300's Porpoise Remains in Emeryville Mounds

1800's Capt. Charles Scammon reports porpoises in SF Bay

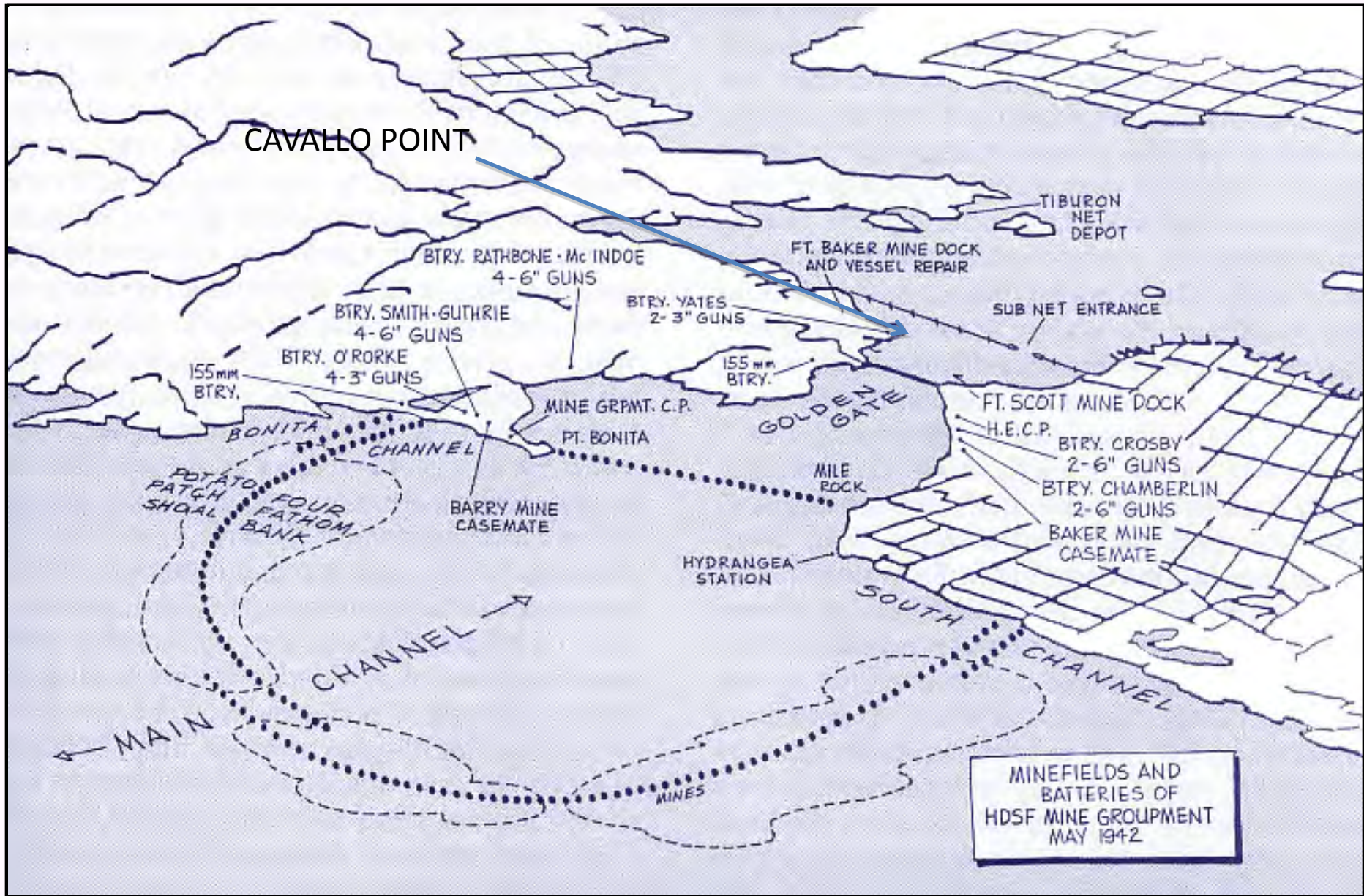
1930's Porpoises frequently seen in SF Bay

1940's Porpoises excluded from Bay (likely due to WWII)

1970's Hundreds of Stranded/Dead Porpoises From Gill Net Interactions  
1980's in coastal waters

2008 Pod of 25 Porpoises, (2 Cow/Calf Pairs) seen off Cavallo Point  
~likely not the first ones in the bay, but good time  
approximation

2012 We are Collecting Sightings By Citizen Scientists



From *Artillery at the Golden Gate* by Brian Chin

GGCR investigators are authorized under a 5-year permit from NMFS (LOC No. 15477) for close approach of porpoises and dolphins from Bodega Bay to Half Moon Bay (SF-Russian River Stock)

Study Area



- 1. Western limit; 2. COLREGS Line; 3. Golden Gate Bridge
- 4. SF-Oakland Bay Br; 5. Richmd-San Rafael Br; 6. San Pablo Bay NWR
- 7. Carquinez Strait 8. Upriver Limit 9. Dumbarton Bridge; 10. SF BayNWR

# Photo-identification of recognizable individuals

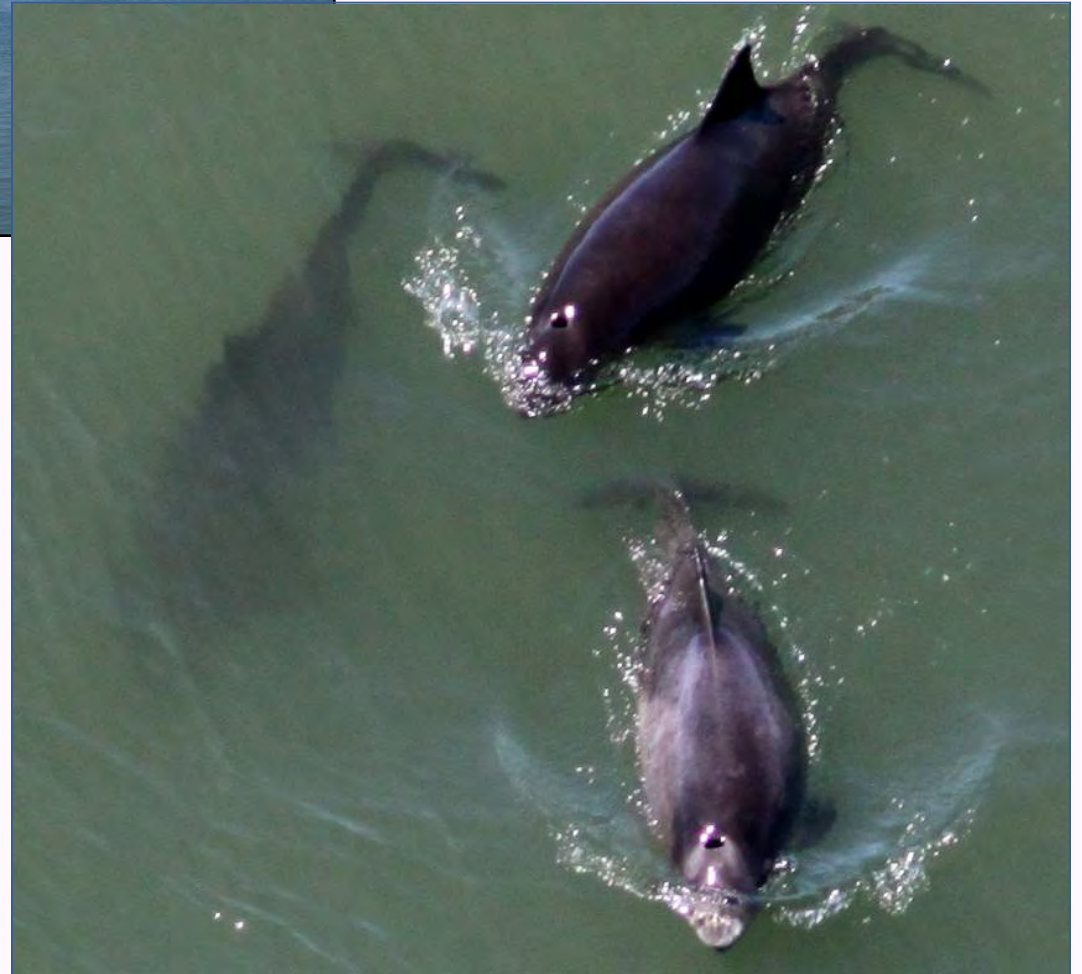


By boat





From the Golden Gate Bridge:  
photographing from the pedestrian  
walkway (230 ft above sea level)





# Color variation

SFB 45  
dark skin



SFB 154  
light skin



# Color variation

Your Basic  
white porpoise  
April 30, 2011



# Scars



SFB-167

seen  
from boat  
Sept. 2010



re-sighted  
from bridge  
October 2010

# Anthropogenic impacts

SFB 172  
net  
entanglement?  
September 2010  
sighted 4 times



October 2010



# Historical Data (Citizen Science)

- Spoke with Tiburon/Angel Island Ferry Personnel
  - Harbor Porpoises Common until the early 1940's
- Questionnaire of Local Boaters
  - N=~30
  - Same General Pattern
  - NO PORPOISES UNTIL A COUPLE OF YEARS AGO (2008)

# San Francisco Bay

areas of porpoise sightings





Ebb Tide Surface Currents  
looking east



HARPO

HARPO

HARPO

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image © 2012 TerraMetrics

Google

37°56'18.93" N 122°23'57.86" W elev 16 m

Eye alt 35.59 km



# Feeding

Porpoise following fish  
November 2010



# Mating Behavior



1

Possible  
courtship



2



3

July 2010



SFB 167  
September 2010



October 2010

## Mothers & Calves

gestation: 10.5  
months

born in summer  
no twins

nursing: 10 months  
birth rate: every year?

Calf about to take a breath  
next to its mother

October 2010



## Mother and Calf, Lactation & Resting



July 2010

# San Francisco Bay

areas of porpoise sightings



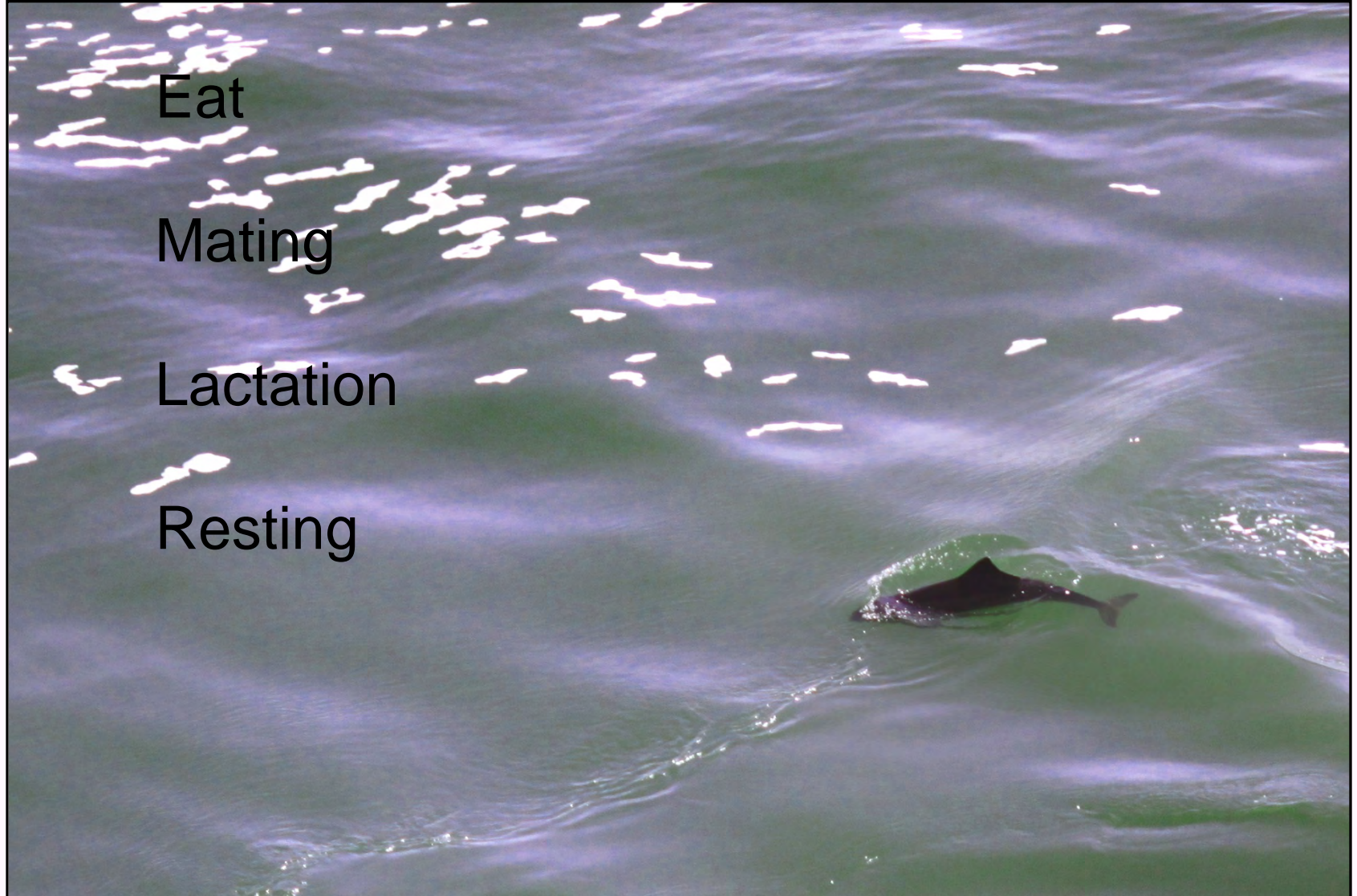
# RETURN OF THE PORPOISES TO SF BAY....

Eat

Mating

Lactation

Resting



# Golden Gate Cetacean Research

[www.ggcetacean.org](http://www.ggcetacean.org)

## THANKS TO:

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