

First Record of California Coastal Bottlenose Dolphins (*Tursiops truncatus*) in Northern California Offshore Waters

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Coastal Bottlenose Dolphins Regularly Seen Close to Shore



Sutro Bath Feb 2013



Frank Quirarte 2016



Ocean Beach, 2 December 2020

San Francisco Study Area

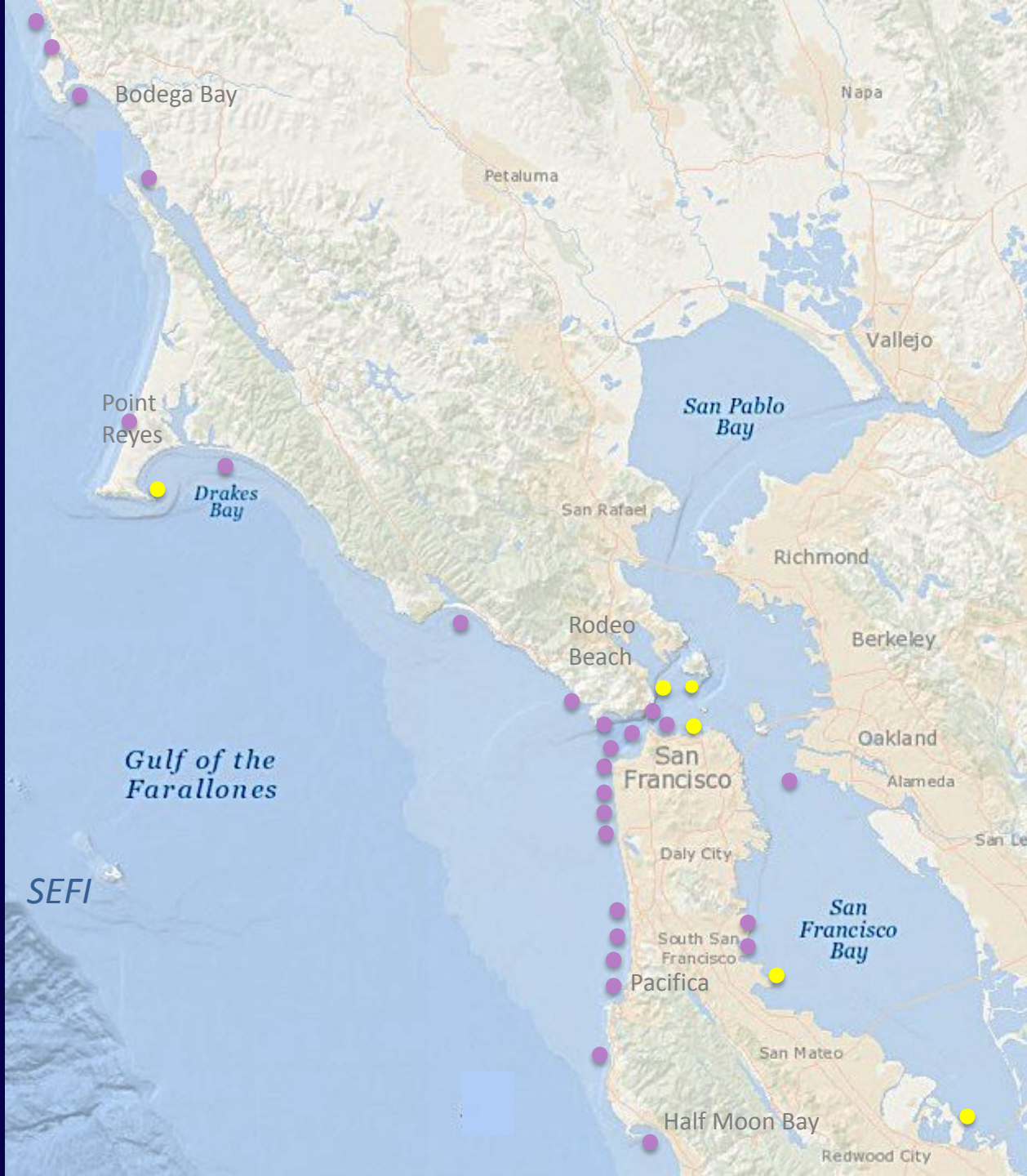
● Sightings, ID photos obtained

● Sightings, no ID photos

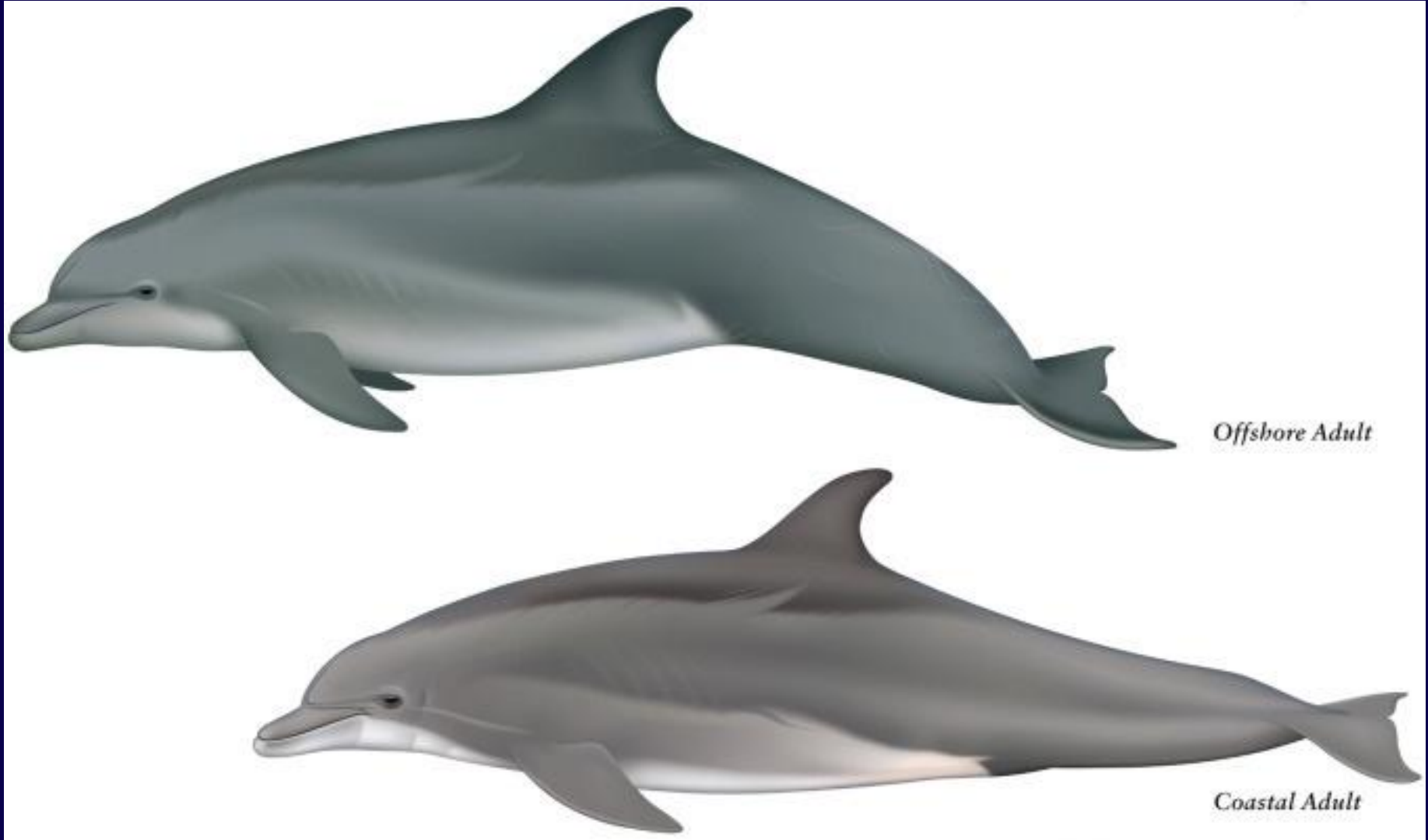
Approximately:

✓ 300 km of coastline

✓ To date, most observations and photography from shore



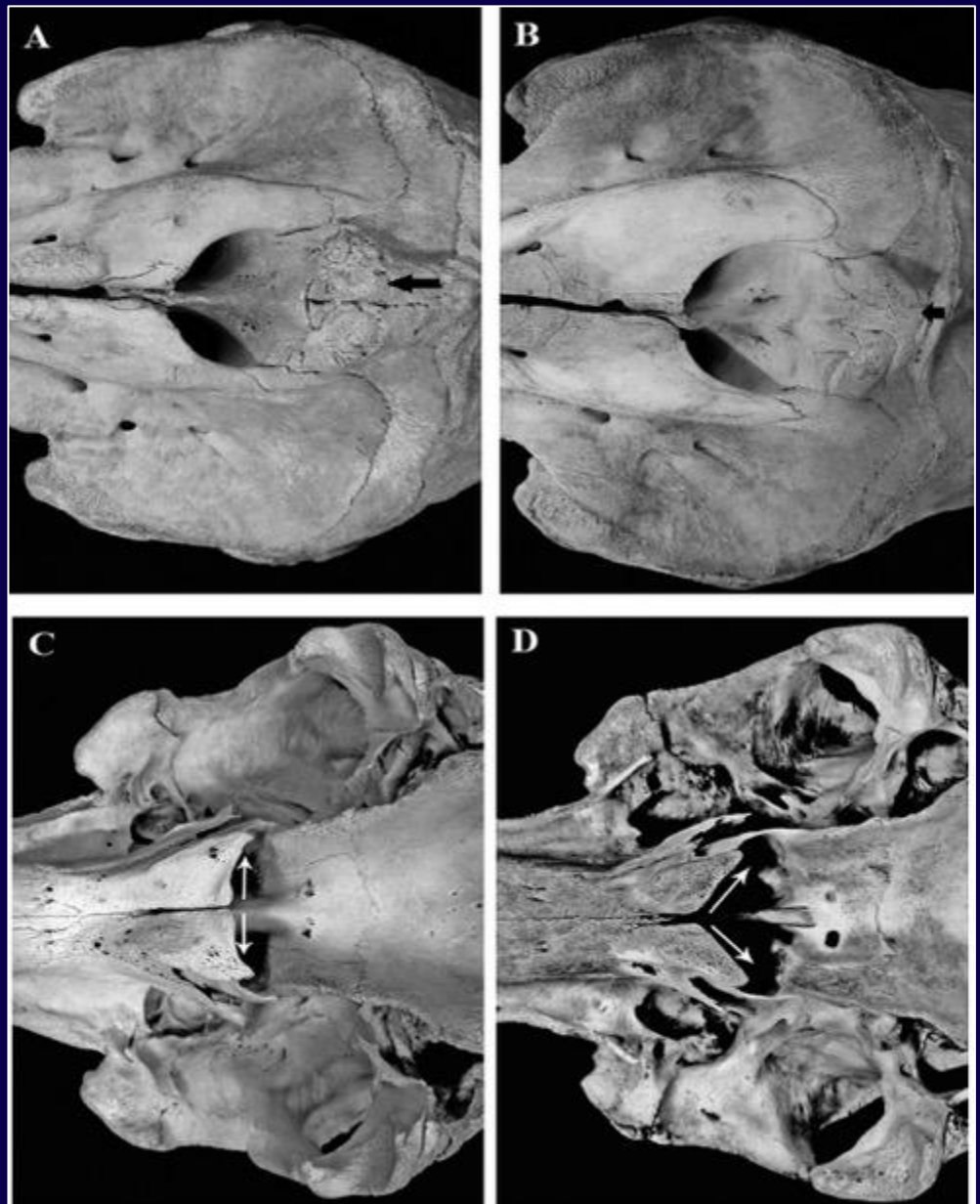
Coastal and Offshore Ecotypes



Ecotype Differentiation

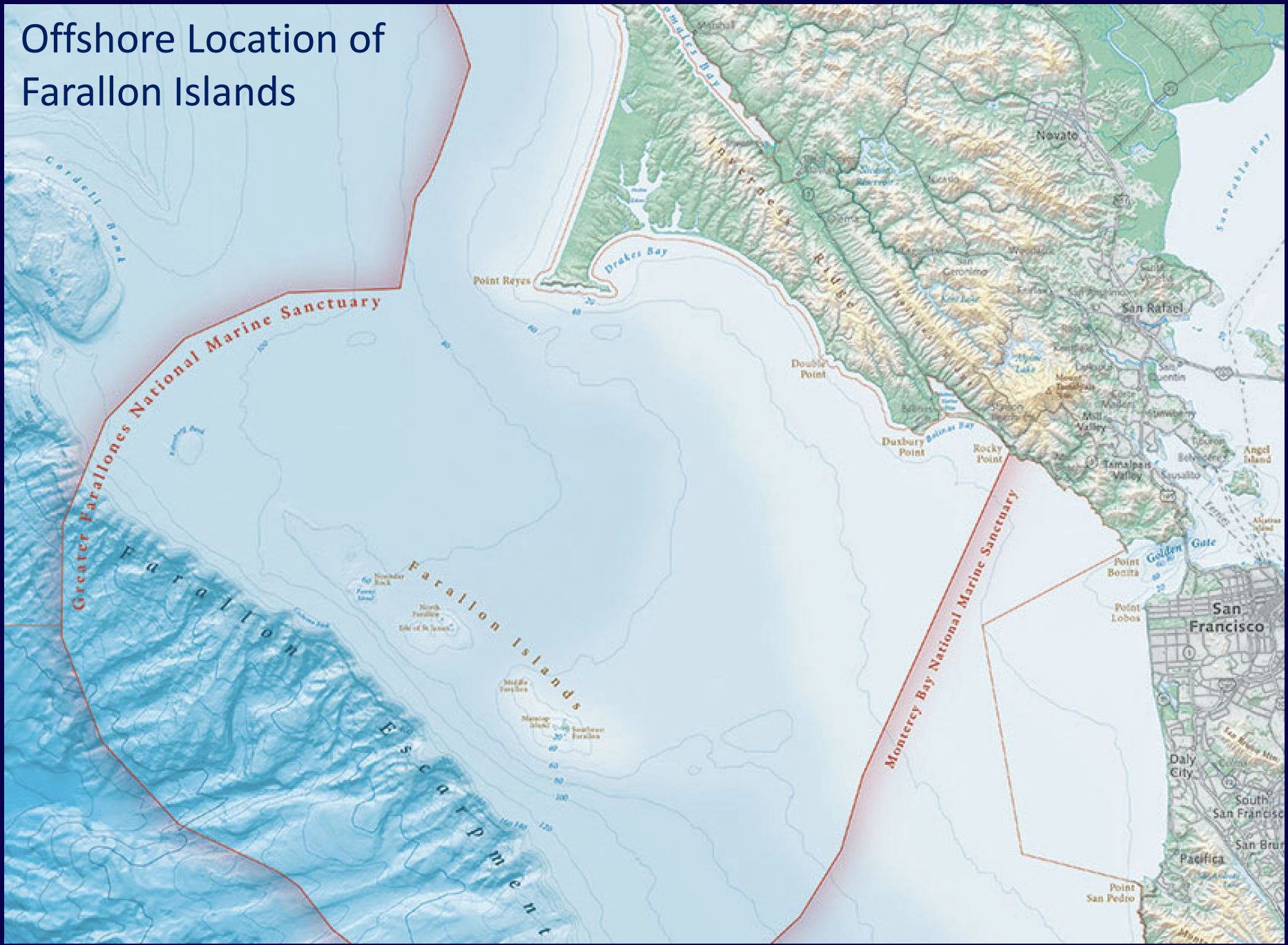
- Genetically Distinct
- Habitat Partitioning
 - < 10 m depth
 - < 1 km from shore
- Morphology
 - Differences in cranial measurements
 - Differences in tooth size & number
 - External appearance?
- Behavior
 - Foraging
 - Group Size

(Perrin et al. 2011, Walker 1980)



Offshore and coastal common bottlenose dolphins of the western South Atlantic face-to-face (Costa et al. 2016)

Offshore Location of Farallon Islands



Southeast Farallon Island,
Fisherman's Cove



Dolphin 1:

Southeast Farallon Island Sighting on 18 March 2019



Akeakamai # 21



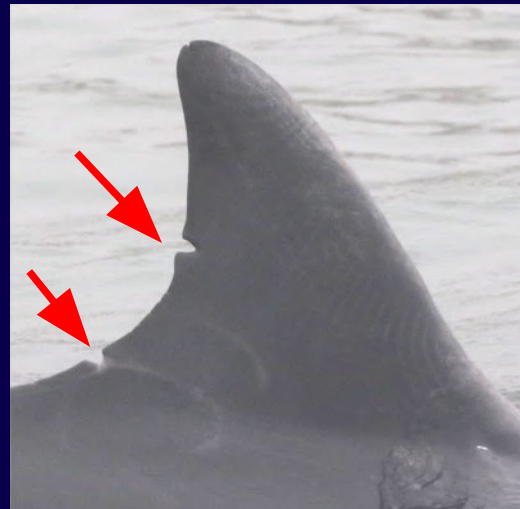
Tikawana # 22



Oreo # 31



17 Sep 2020, Pacifica

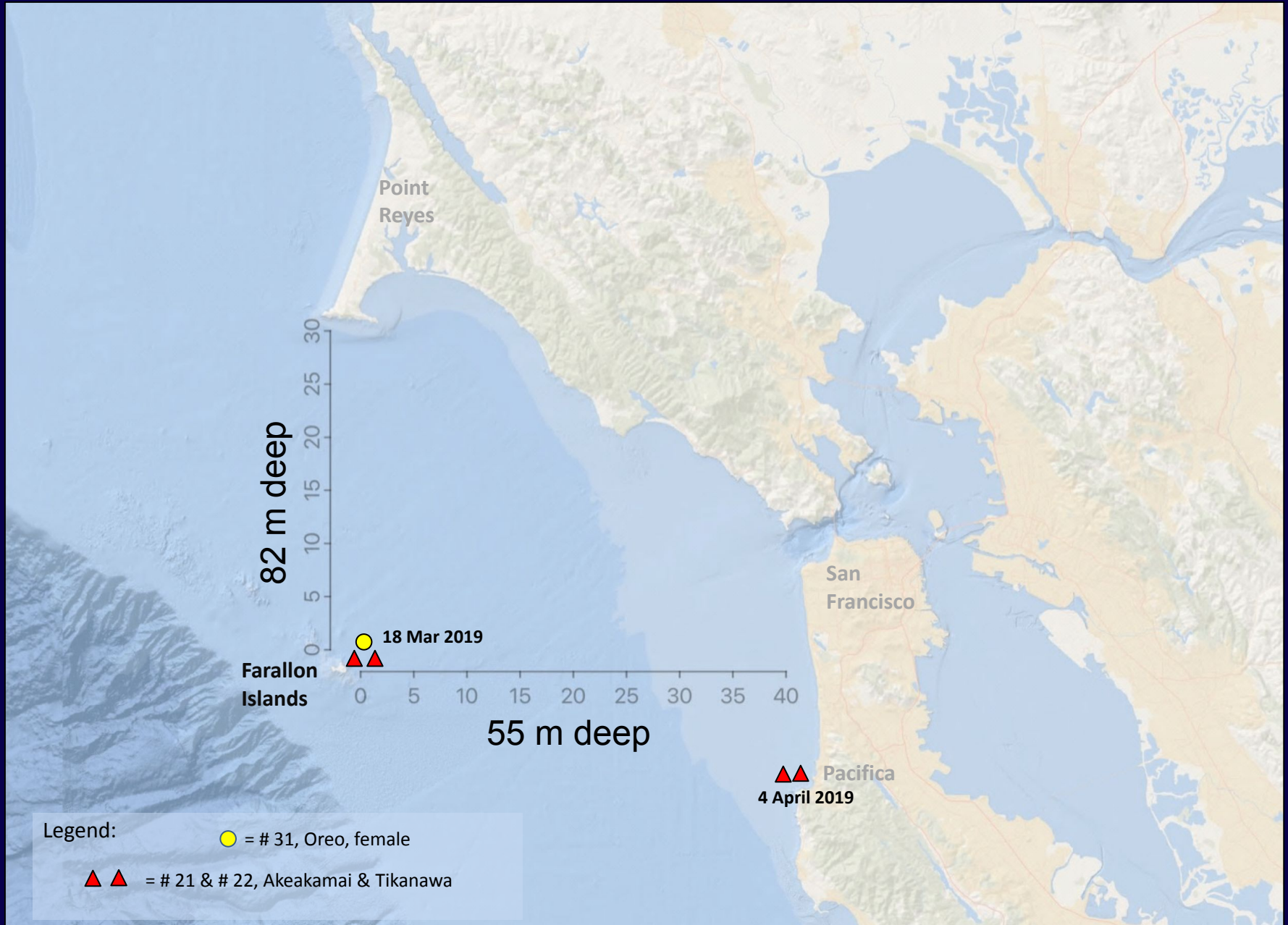


17 Sep 2020, Pacifica



21 Feb 2018, San Francisco

SEFI Sighting and Subsequent Sighting



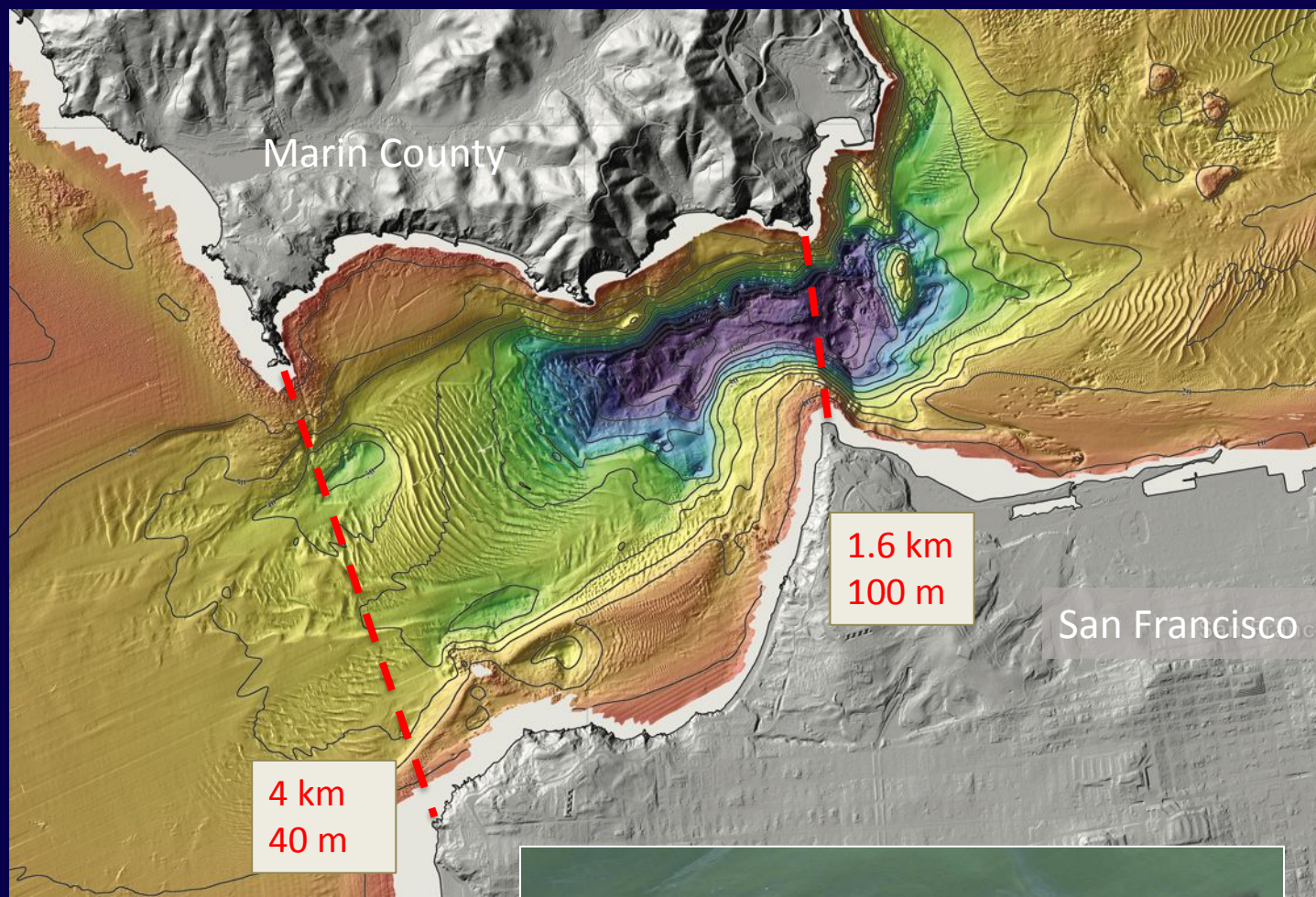
Bottlenose dolphins in San Francisco Bay



Crossing the Golden Gate

Where?

- ✓ SF Bay is one of the largest estuaries in the world
- ✓ The entrance is the widest and deepest body of water in their range
- ✓ Channel widths range from 1.6 to more than 4 Km
- ✓ Depths range from about 40 to 100 m
- ✓ The regular “crossing point(s)” not yet certain



7 Feb 2016

Ecological Opportunities & Interactions



Fatal attack
observed by
researchers in
Monterey Bay,
15 Sept. 2009

(Cotter et al. 2012)

Dolphin/Porpoise Interactions

Attack
observed off
San Francisco,
4 June 2016



Blunt force trauma:

- Tooth rakes
- Fractures
- Hemorrhagic lesions



TMMC C-654, September 2020

Literature Cited

Costa, A. P. B., Rosel, P. E., Daura-Jorge, & F. G., Simoes-Lopes, P. C. (2016). Offshore and coastal common bottlenose dolphins of the western South Atlantic face-to-face: What the skull and the spine can tell us. *Marine Mammal Science*, 32(4), 1433-1457.

Cotter, M. P., Maldini, D., & Jefferson, T. A. (2012). “Porpicide” in California: killing of harbor porpoises (*Phocoena phocoena*) by coastal bottlenose dolphins (*Tursiops truncatus*). *Marine Mammal Science*, 28:E1-E15

Jefferson, T. A., Webber, M. A., & Pitman R. L. (2015). Marine mammals of the world a comprehensive guide to their identification. Second edition. Academic Press.

Perrin, W. F., Thieleking, J. L., Walker, W. A., Archer, F. I. & Robertson, K. M. (2011). Common bottlenose dolphins (*Tursiops truncatus*) in California waters: Cranial differentiation of coastal and offshore ecotypes. *Marine Mammal Science*, 27(4), 760-792.

Walker, W. A. (1981). Geographical variation in morphology and biology of bottlenose dolphins (*Tursiops*) in the eastern North Pacific (NOAA Administrative Report No. LJ-81-03C). National Oceanic and Atmospheric Administration.

Thank You

- Greater Farallones National Marine Sanctuary
- Point Blue Conservation Science Farallon Is. Team
- California Academy of Sciences
- Oceanic Society
- Citizen Scientists



2015 Ocean Beach

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