Eastern Pacific Blue Whales – Overview for new members of the Whale Entanglement Working Group (Santa Rosa, Sept 3, 2019)



Karin Forney, PhD Research Biologist, Marine Mammal and Turtle Division Southwest Fisheries Science Center, NOAA Fisheries, Santa Cruz, CA Karin.Forney@noaa.gov



ISHERIES | Southwest Fisheries Science Center

Blue whale population trends, 1990-2010

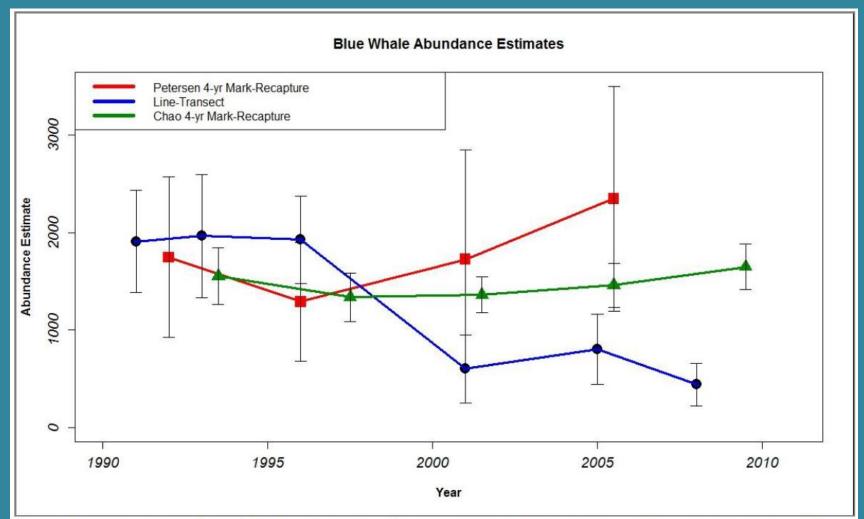
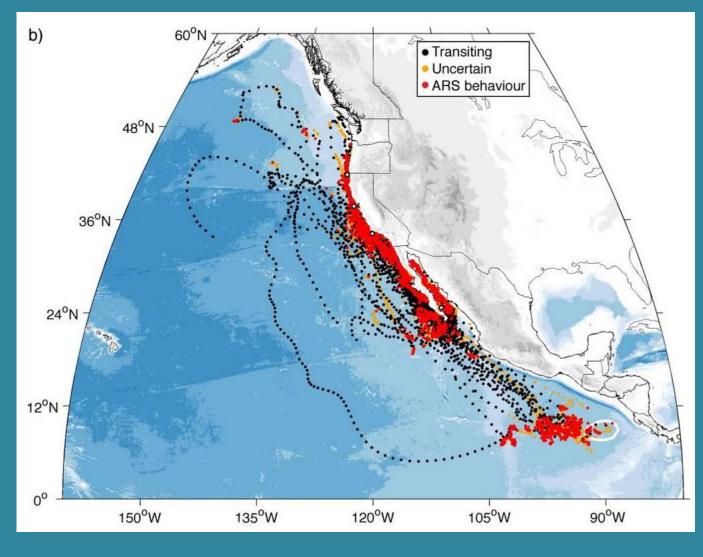


Figure 2. Estimates of blue whale abundance from line-transect and photographic mark-recapture surveys, 1991 to 2011 (Barlow and Forney 2007, Barlow 2010, Calambokidis and Barlow 2013). Vertical bars indicate ± 2 standard errors of each abundance estimate.

Blue whale behavior in the NE Pacific: Tracks of satellite-tagged blue whales



Blue whales feed on krill off U.S. West Coast from about May -Nov

Migrate to tropical waters off Mexico and to Costa Rica Dome during winter

Citation: Bailey et al. 2009 Endangered Species Research

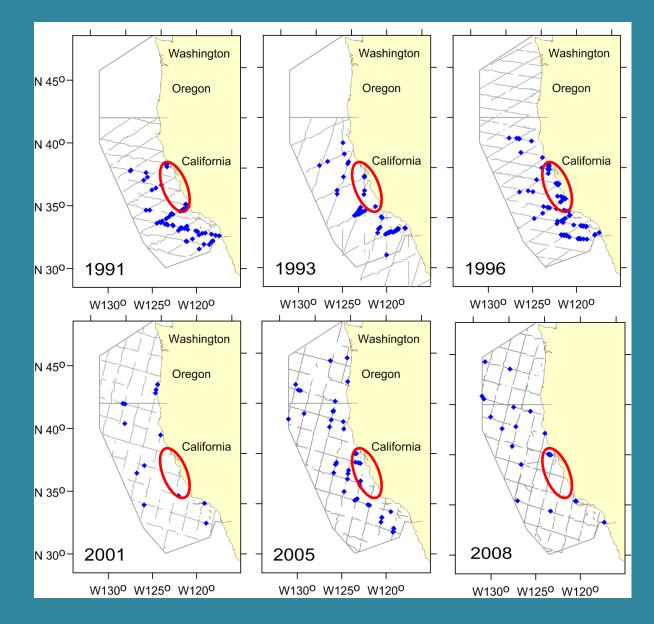
Seasonal timing of CA Dungeness crab fishing and feeding humpback whales, blue whales, and leatherback turtles

	NOV	DEC	JAN	FEB	MAR	APR	ΜΑΥ	JUN	JUL	AUG	SEP	ОСТ
DCRAB Fishing Season												
Humpback Whale Presence												
Blue Whale Presence												
Leatherback Turtle Presence												



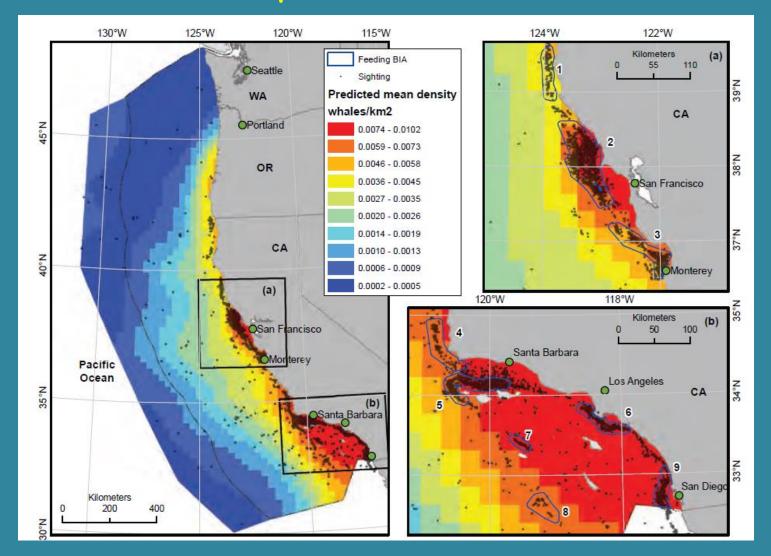
Blue whale distributions are dynamic





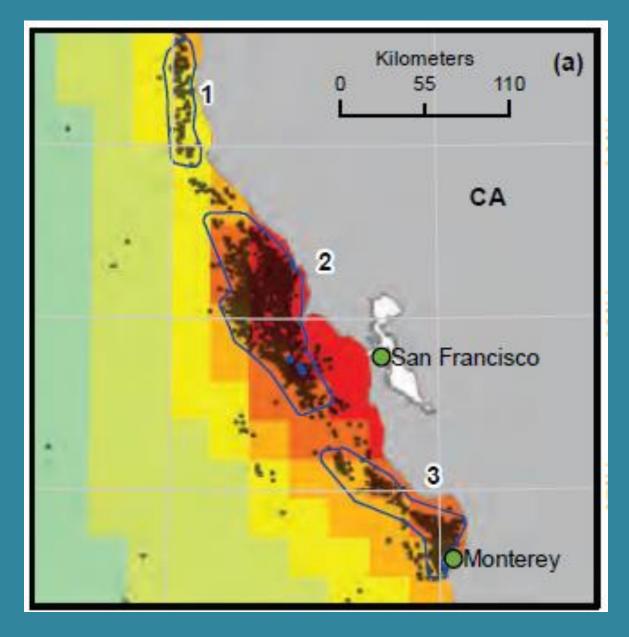
Source: NOAA – Southwest Fisheries Science Center, Marine Mammal and Ecosystem Surveys

Blue whale hotspots off the U.S. West Coast



<u>Citations:</u> Calambokidis et al. 2015, Aquatic Mammals Becker et al. 2016, Remote Sensing Irvine et al. 2014. PLoS ONE

Blue whale hotspots (zoomed in, Central CA)



Along shelf-edge; Cordell Bank; Monterey Canyon

Take Home Points

Blue whales feed exclusively on krill (unlike humpback whales that may feed on krill <u>or</u> schooling fish)

- Distribution hotspots include canyon edges, Cordell Bank, Santa Barbara Channel, in waters > 300 ft deep
- Population size ~ 1650 whales, has appeared stable since regular monitoring began in 1990s.
- Ship strikes and fishing gear entanglements are a concern for this population.