

Large Whale Status in the North Pacific



The Current Status of Large Whale Populations in the North Pacific

Paul Wade, Phil Clapham & Yulia Ivashchenko
NOAA Fisheries, AFSC, Marine Mammal Lab, Seattle



Blue whales

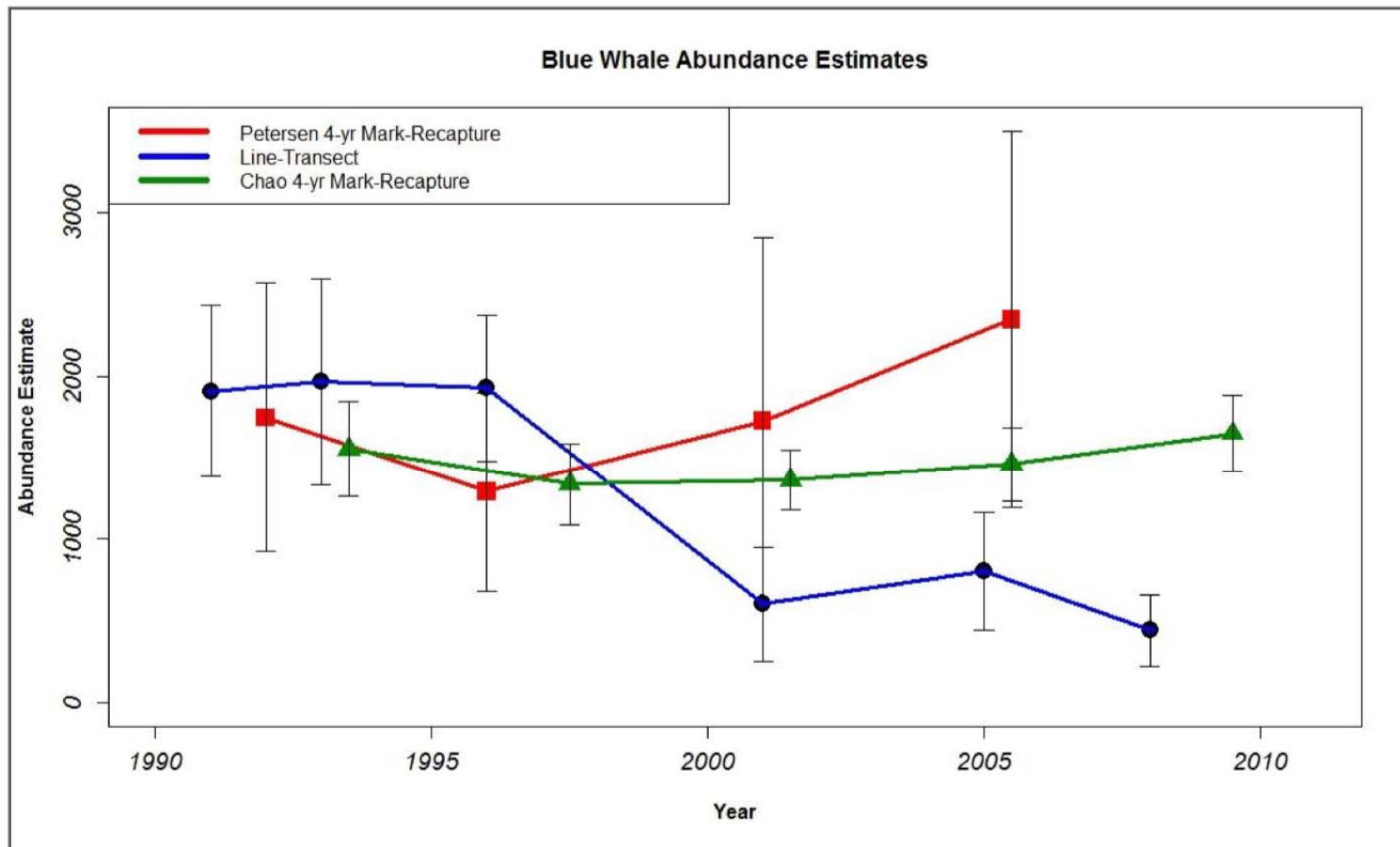


Figure 2. Estimates of blue whale abundance from line-transect and photographic mark-recapture surveys, 1991 to 2011 (Barlow and Forney 2007, Barlow 2010, Calambokidis and Barlow 2013). Vertical bars indicate ± 2 standard errors of each abundance estimate.

- Calambokidis et al. 2009 show apparent expansion of California blue whales to GOA

,838

7

population

Blue whales



Once common but now
rare in the Aleutians.
~900 killed from Akutan shore
whaling station 1914-1939

University of Alaska Anchorage. Archives & Special Collections

Photo: University of Alaska Anchorage

IWC/POWER Cruise Blue whale sightings in blue

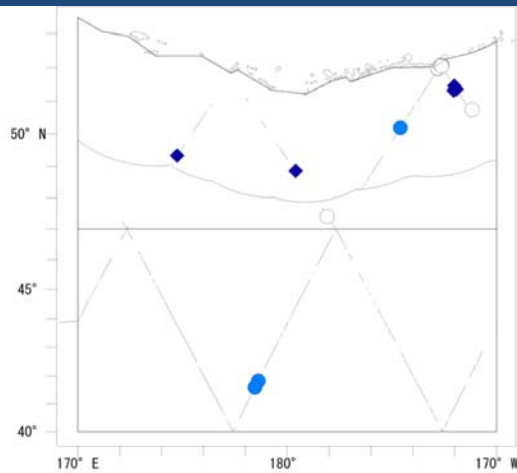
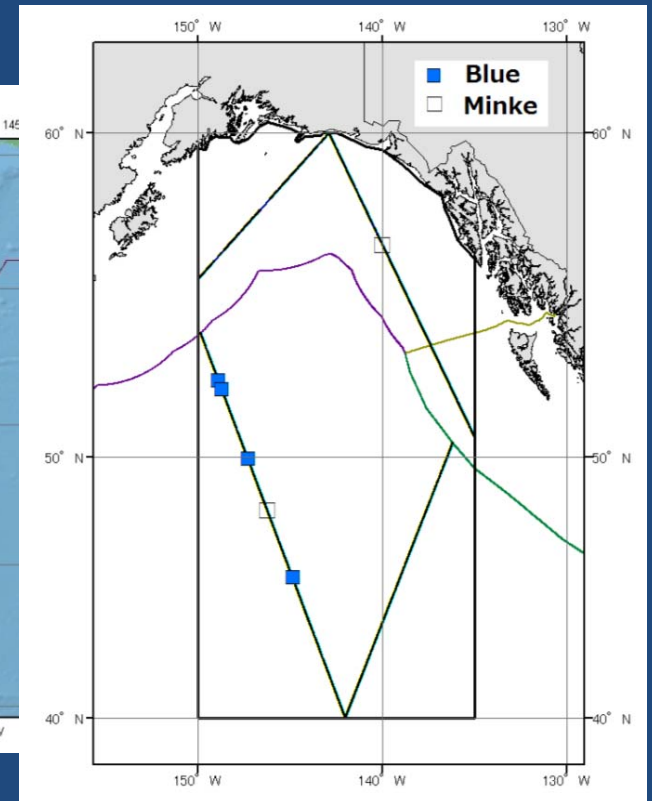
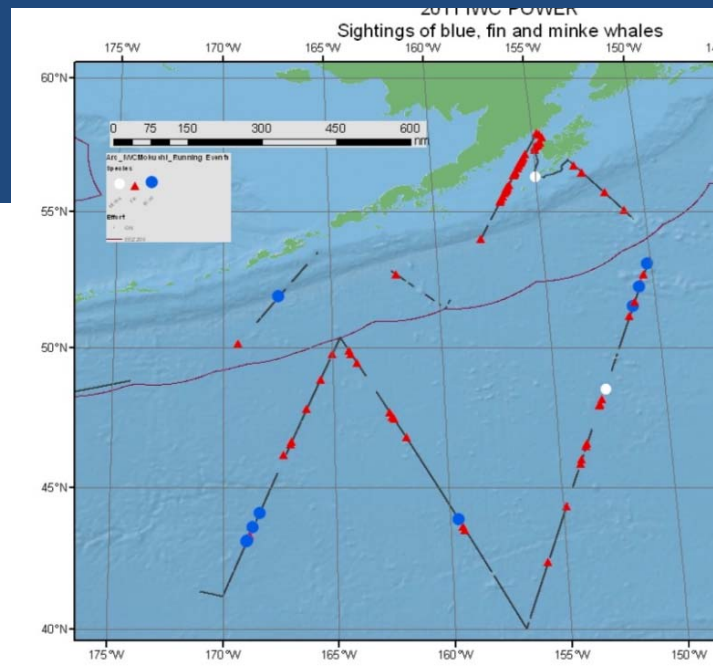


Figure 2a. Positions of blue (colored circle), common minke (white circle) and humpback (diamond) whales observed in the research area.



Fin whales



Total catch – 75,302

Current status – Unknown but likely abundant and increasing

IWC/POWER Cruise Fin whale sightings in red

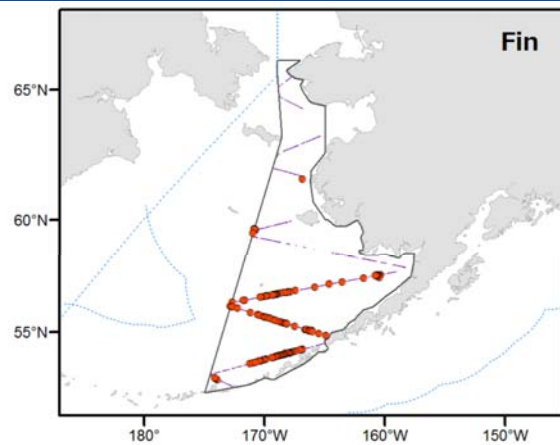
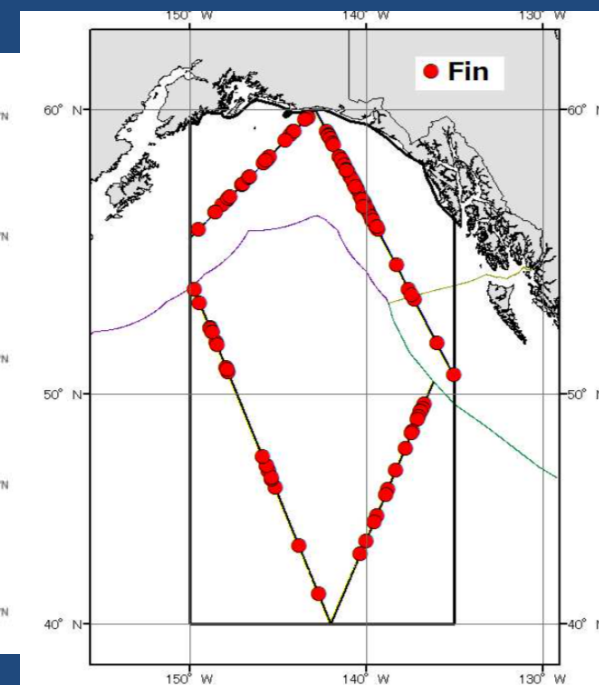
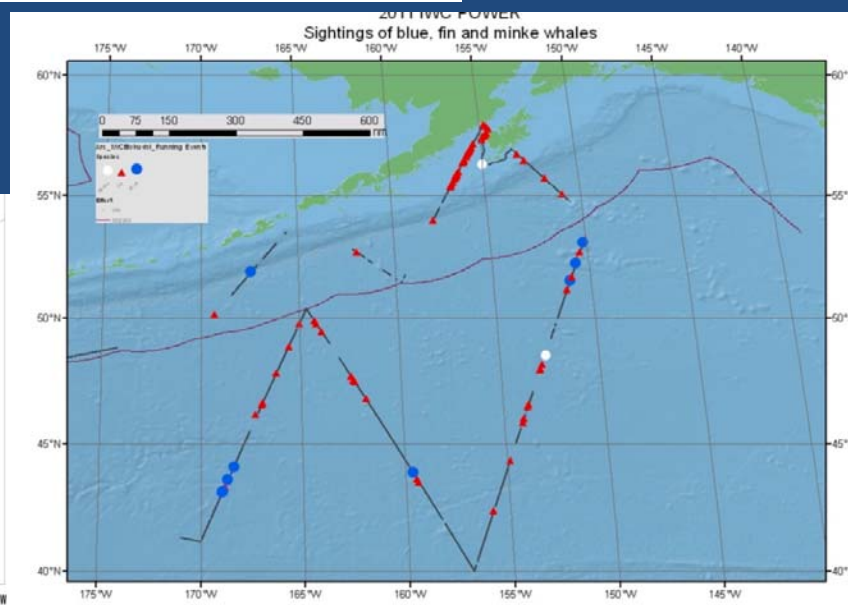
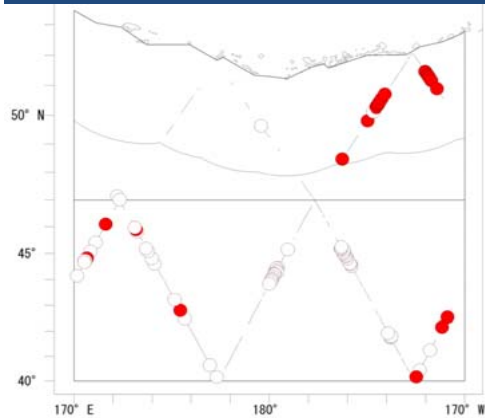


Figure 2b. The searching effort (thin line) and sighting positions of fin whales (red circle) during the 2017 POWER cruise.



Sei whales

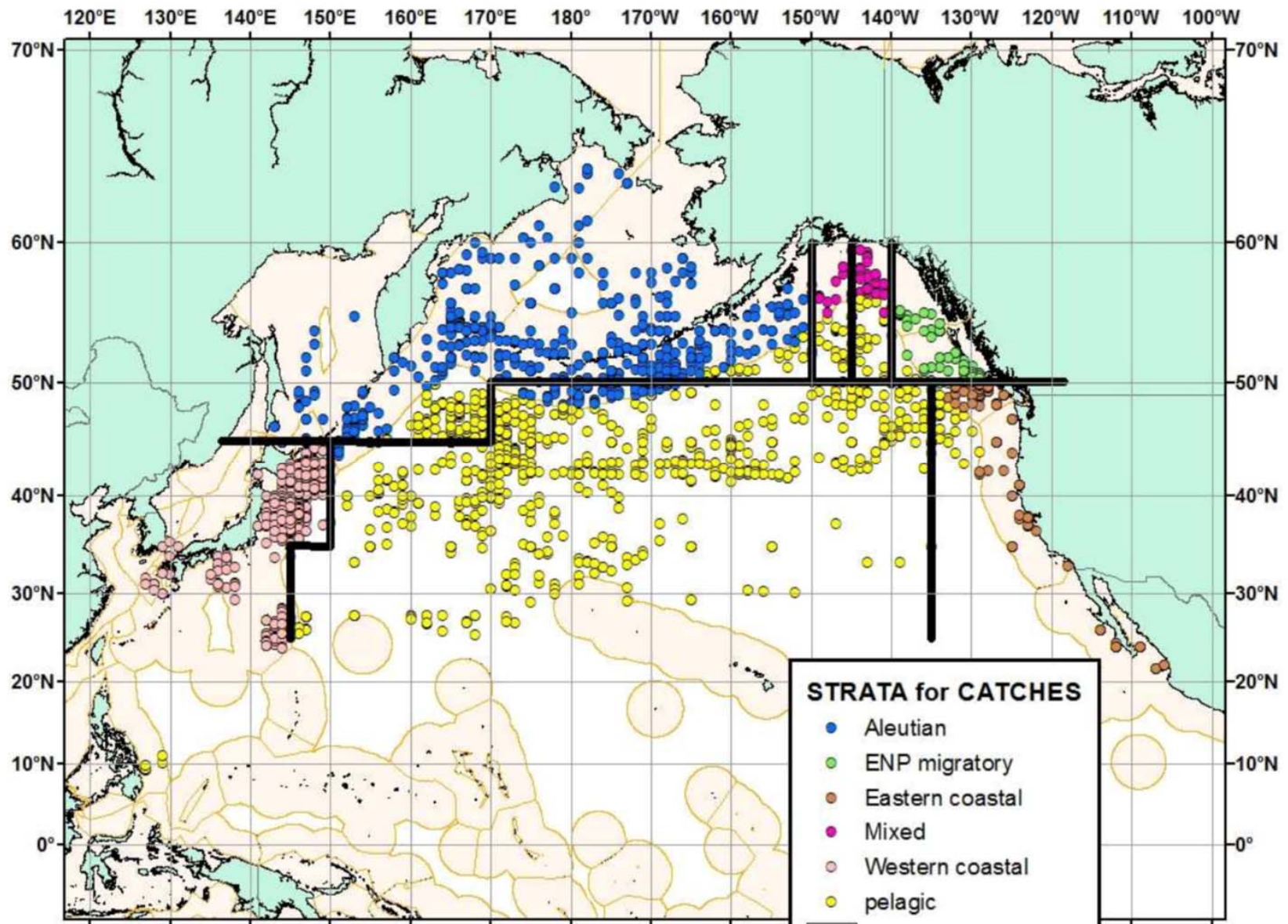
Total historic commercial catch – 73,903

Abundance estimates

- POWER Cruise eastern pelagic: 27,197 (0.24)
- Western NP pelagic (off Japan): 5,406 (0.40)
- West coast of US: 519 (0.40)
- Japanese coast Extirpated?
- Aleutians and Bering Sea Extirpated?
- Current catch in 2017 of 134 in western N. Pacific during NEWREP-NP

Sei whale catches by proposed stock areas.

Punt. 2018. Updated progress report: A multi-stock model for North Pacific sei whales, with preliminary results. Sc/67B/IA01



North Pacific sei whale pelagic abundance 27,197 (0.24)

Hakamada and Matsuoka 2015 Abundance estimate for sei whales in the North Pacific based on sighting data obtained during IWC-POWER surveys in 2010-2012 (SC/66a/IA12)

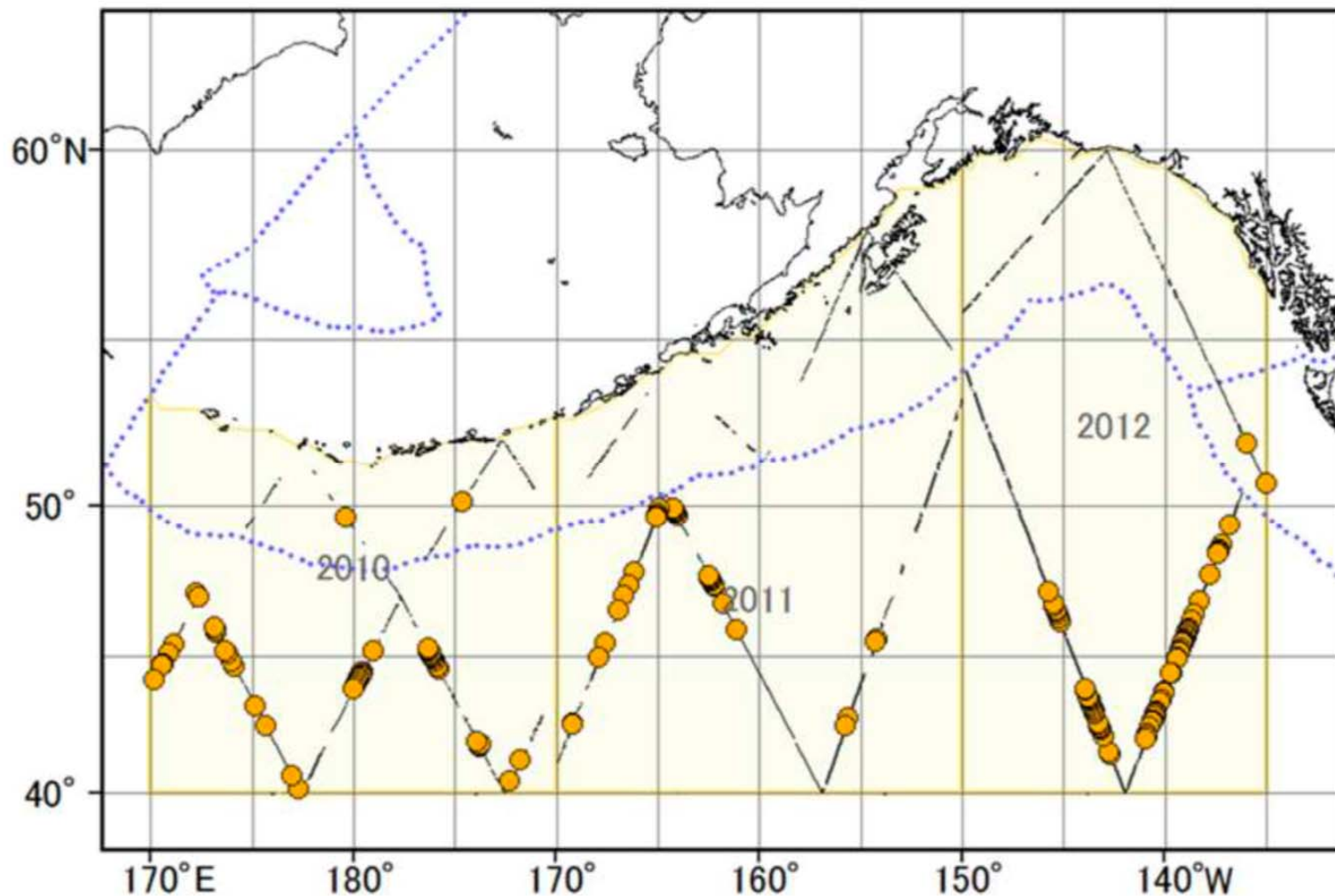
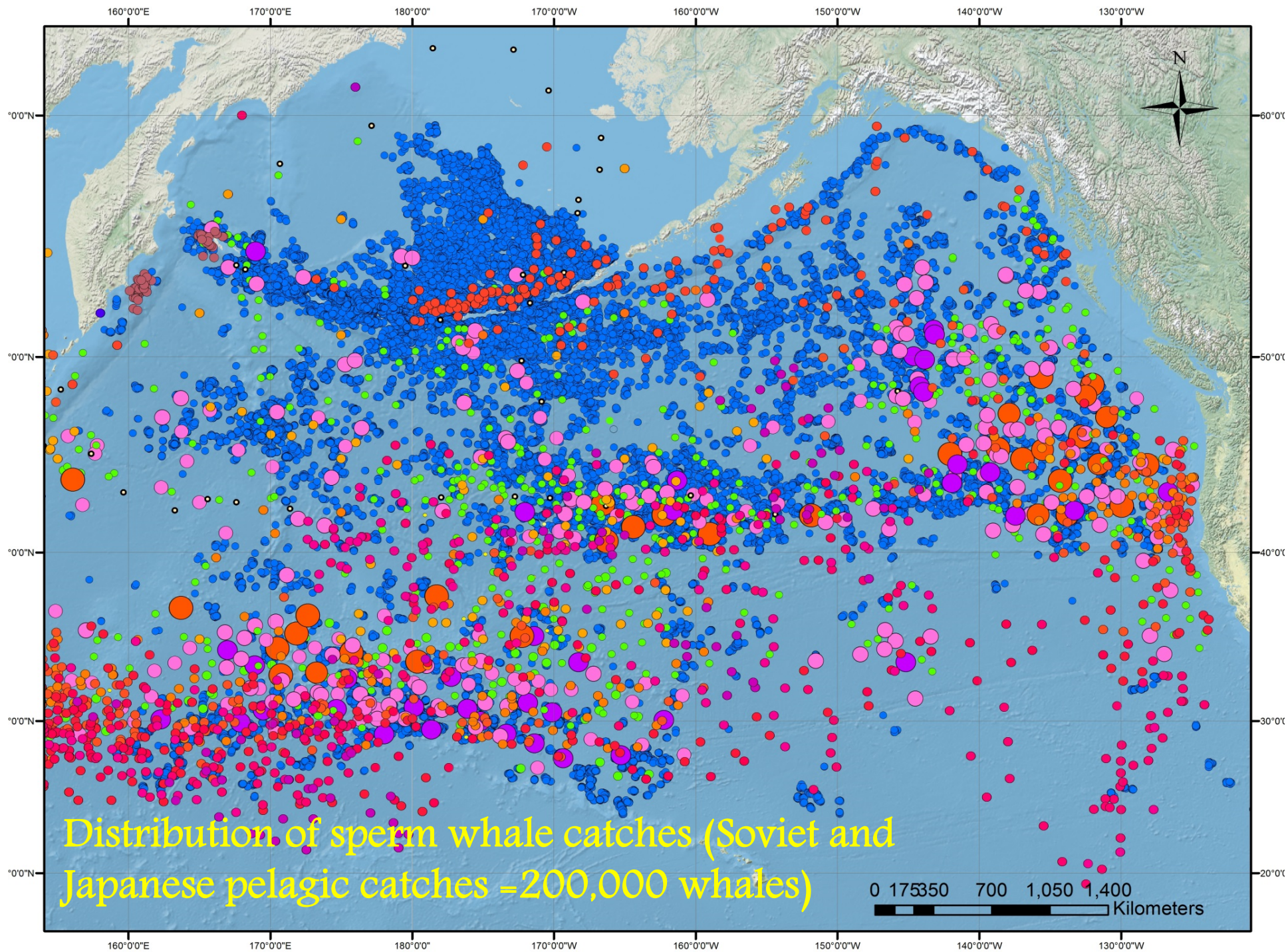


Figure 3. Plot of actually surveyed track line (black lines) and position of primary sightings of the sei whales (orange circles) during 2010-2012 IWC-POWER surveys.

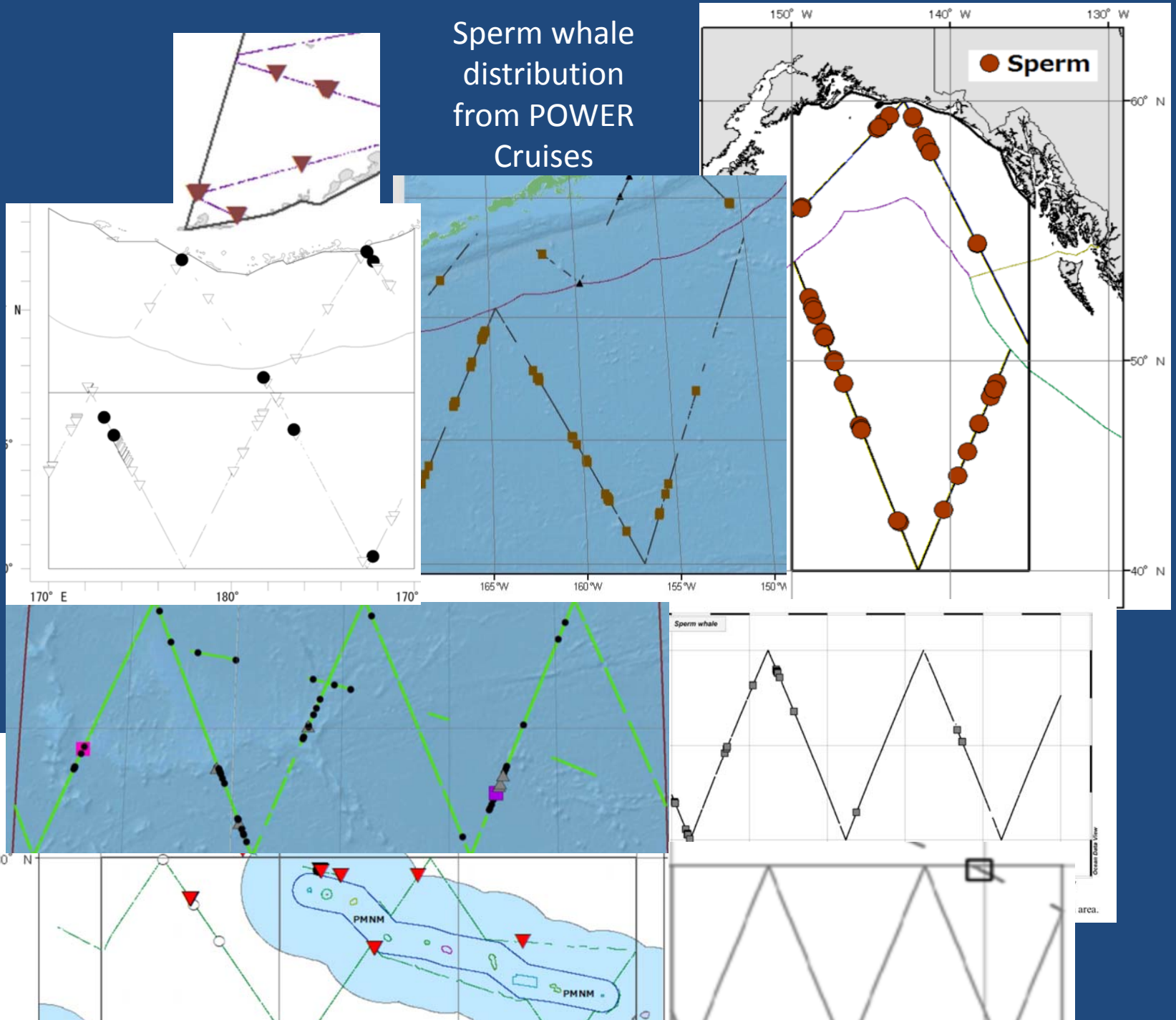
Sperm whales



Total catch – 314,942. Current status – unclear



Sperm whale distribution from POWER Cruises



Humpback whales



Total catch – 29,131


Current status – Variable but recovering

Photo: Colin Baxter

The SPLASH Study



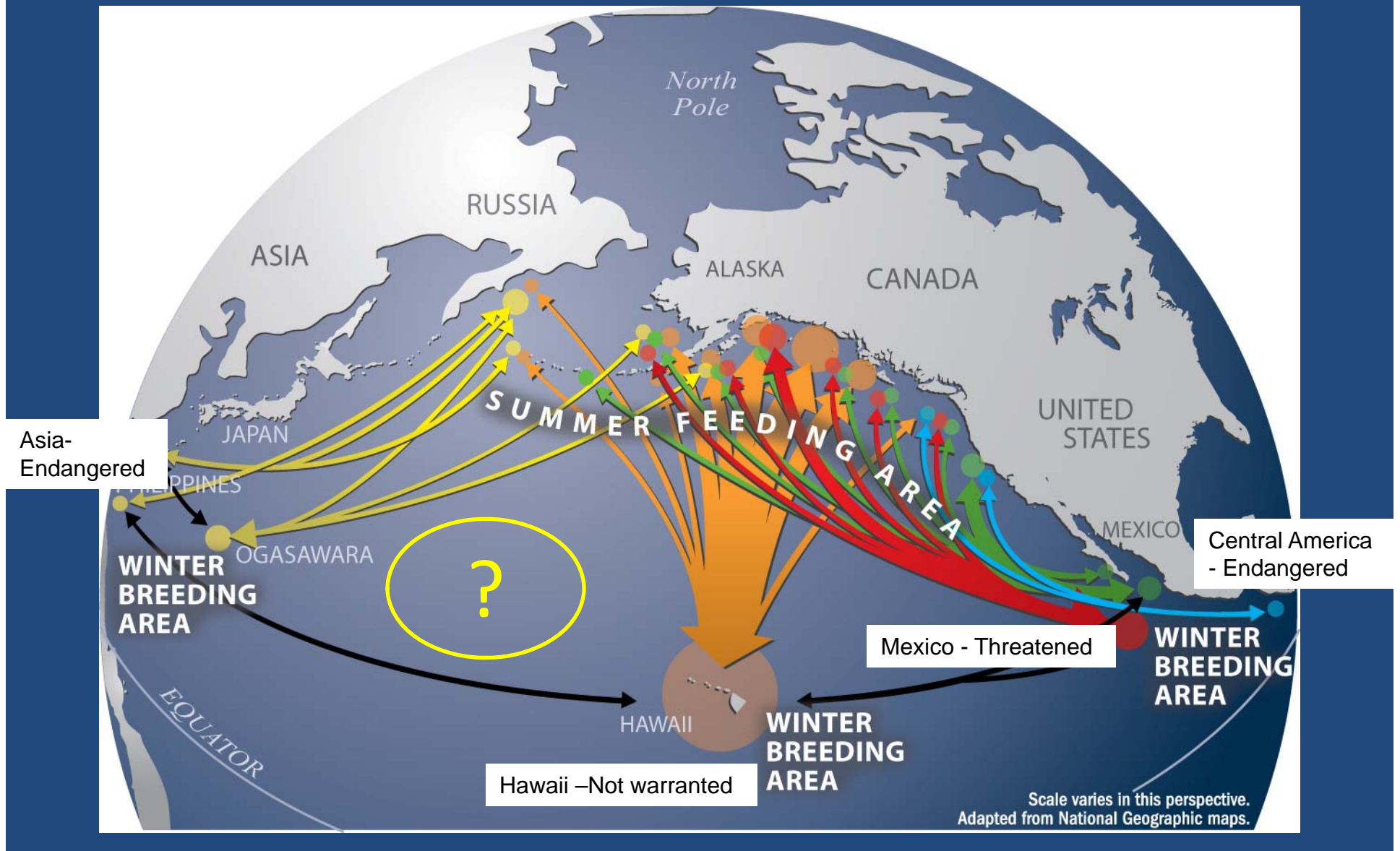
Combining photo-ID and genetic data from many local studies to understand the entire North Pacific population

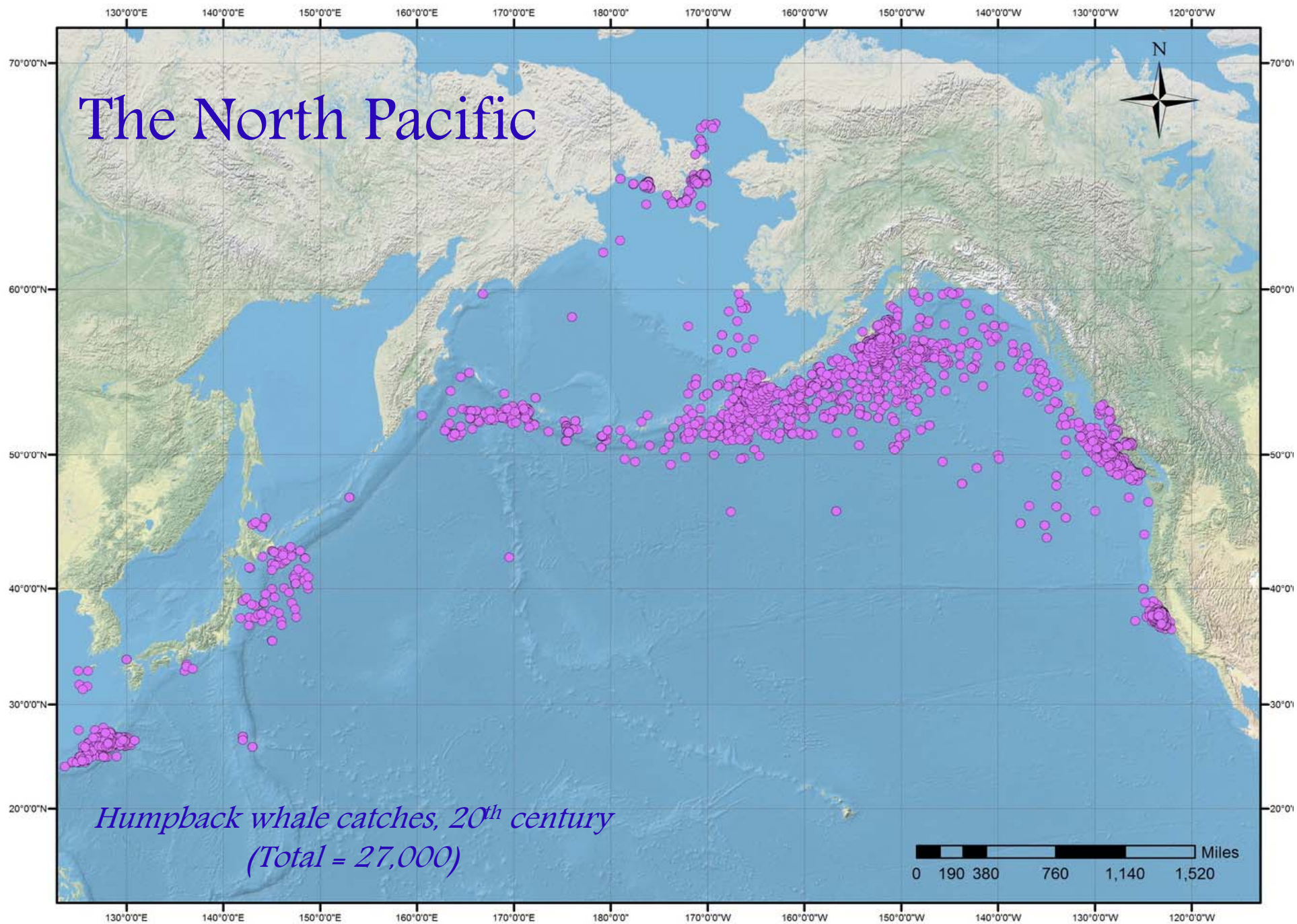


SPLASH estimate:
21,000 whales
5-7% rate of increase

Photo: Colin Baxter

Wandering Whales





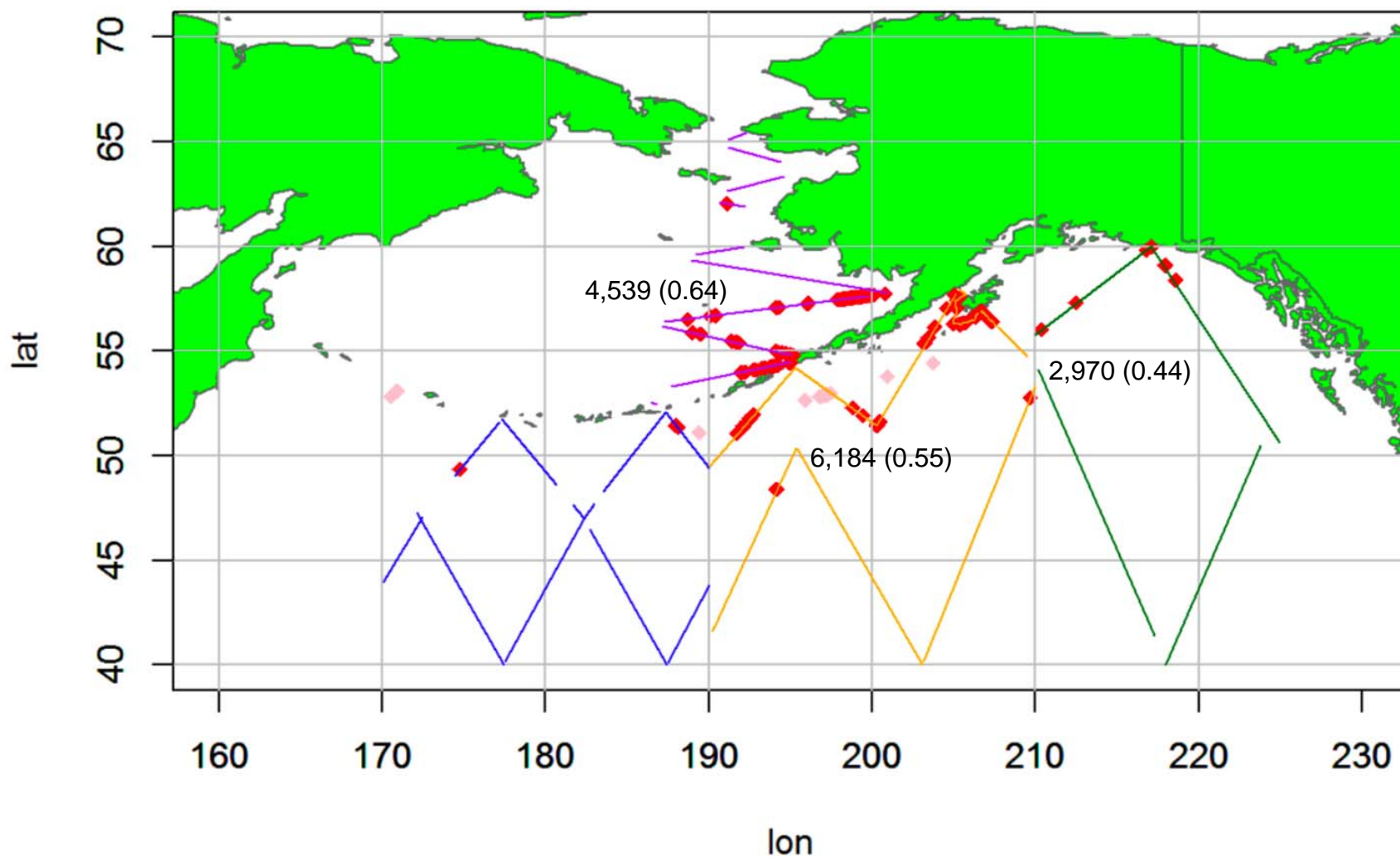
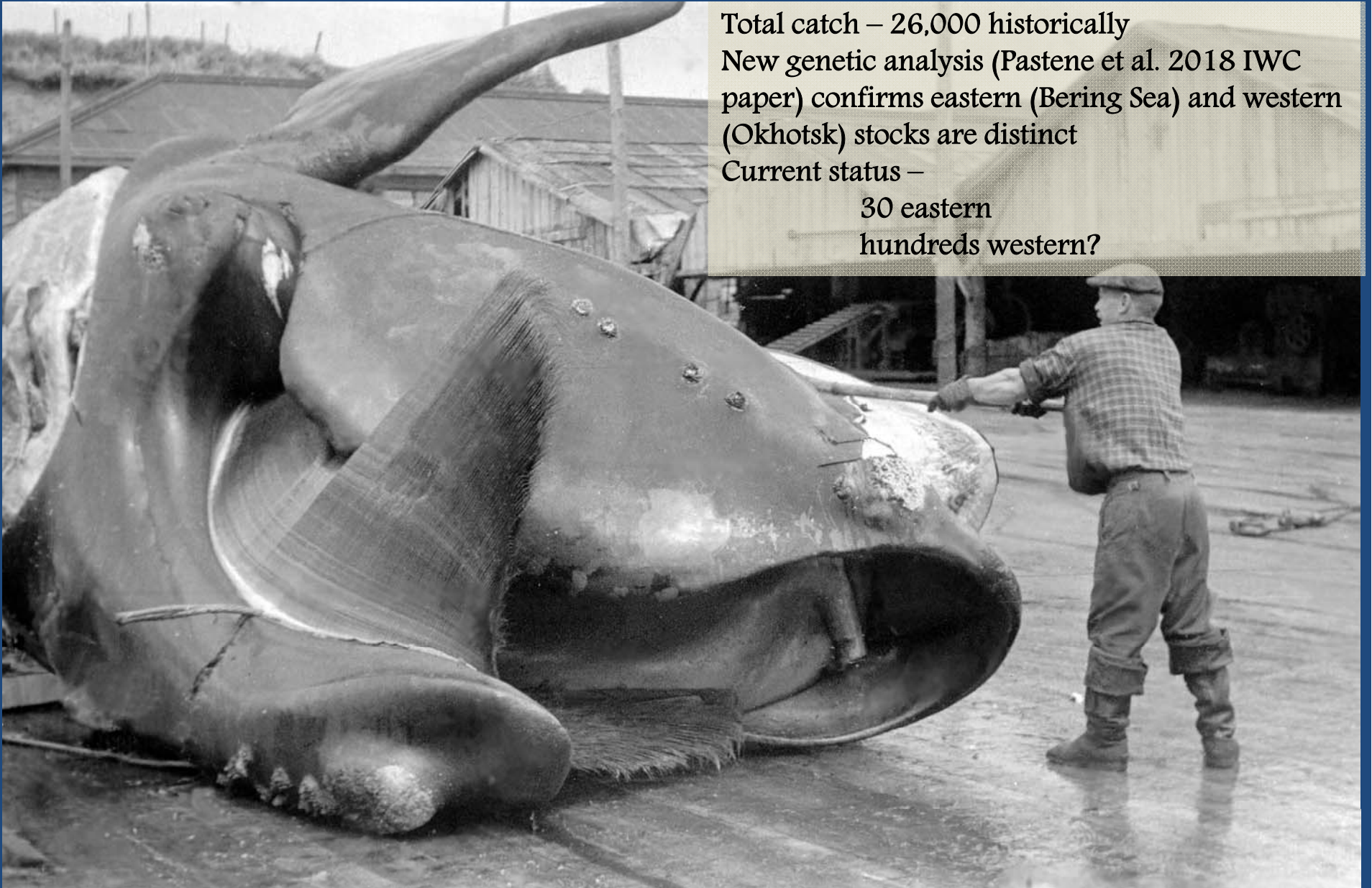


Figure 1. Plot of actually surveyed track line (2010: blue, 2011: orange, 2012: green, 2017: purple) and position of primary sightings of the humpback whales (red circles) during 2010-2012 and 2017 IWC-POWER surveys. (Pink circles show the position of detect on transit.)

Right whales

Total catch – 26,000 historically
New genetic analysis (Pastene et al. 2018 IWC
paper) confirms eastern (Bering Sea) and western
(Okhotsk) stocks are distinct
Current status –
30 eastern
hundreds western?





BOWHEAD WHALES

Western Arctic (Bering–Chukchi– Beaufort)

Total catch – 18,000
historical whaling

Current status – 16,892
(2011), increasing @ 3.7%
per annum

Okhotsk Sea stock. ?

Current & Future Issues

- Entanglement
- Ship traffic
- Noise
- Pollution
- Climate change



Photo: Colin Baxter

Humpback whale and shearwaters, Aleutian Islands

