



The SPLASH Project: An Overview and Update



Structure of Populations, Levels of Abundance, and Status of
Humpbacks in the North Pacific



Humpbacks migrate seasonally

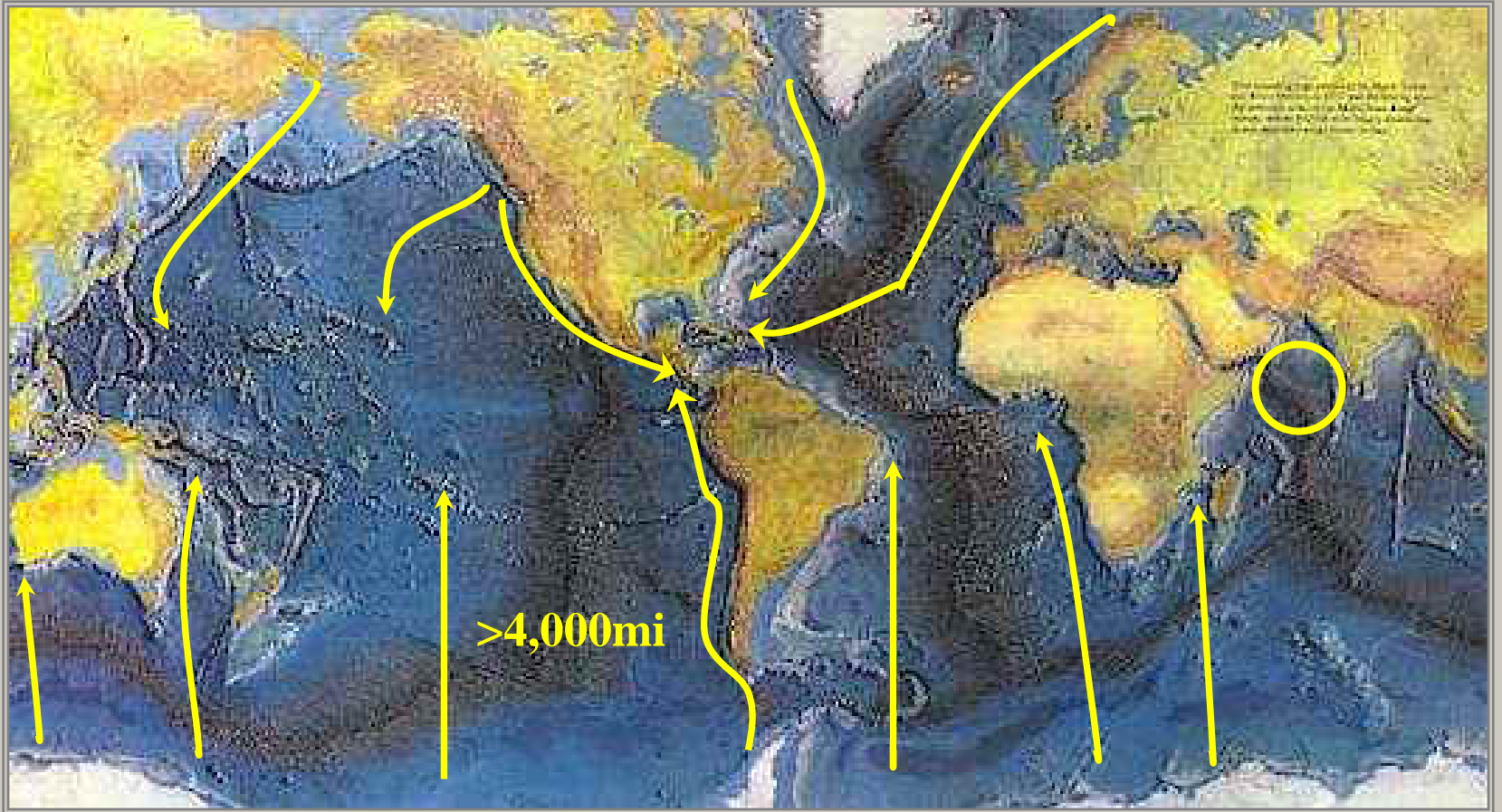
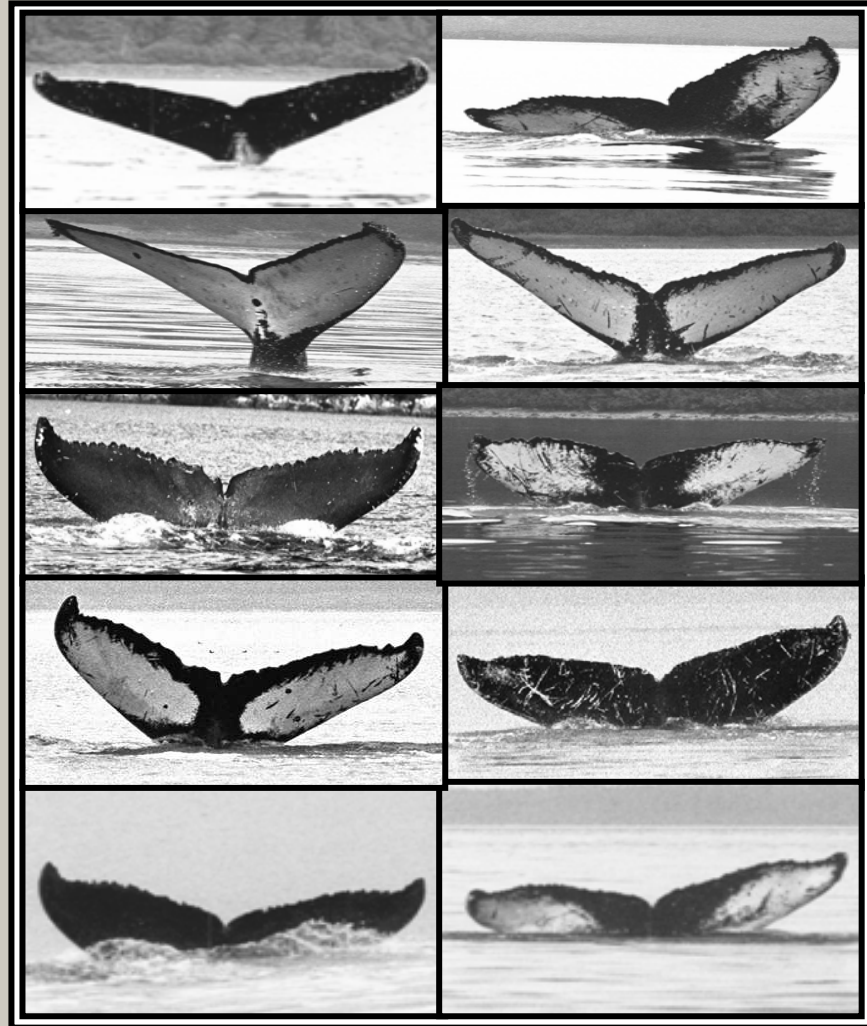




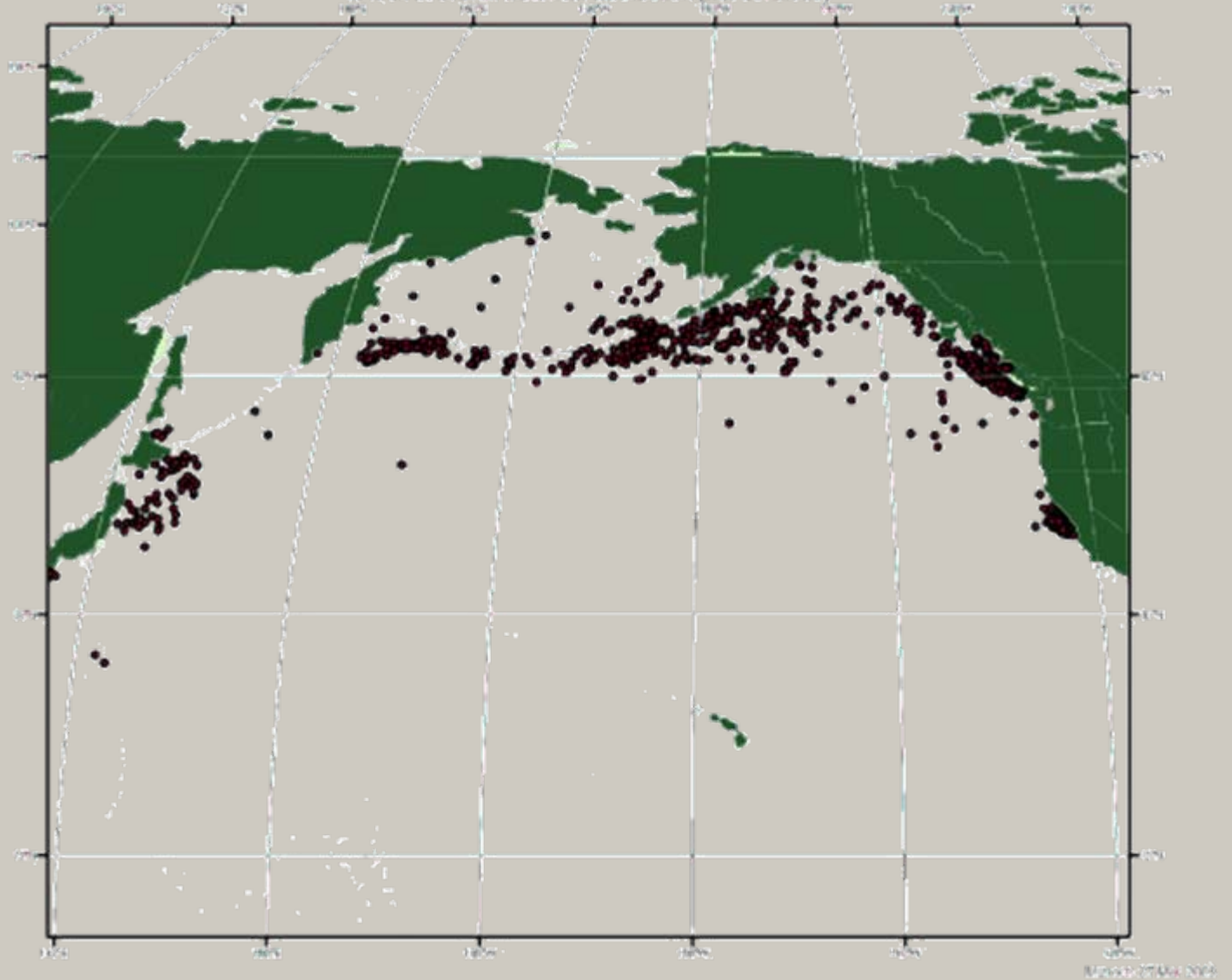
Photo-Identification





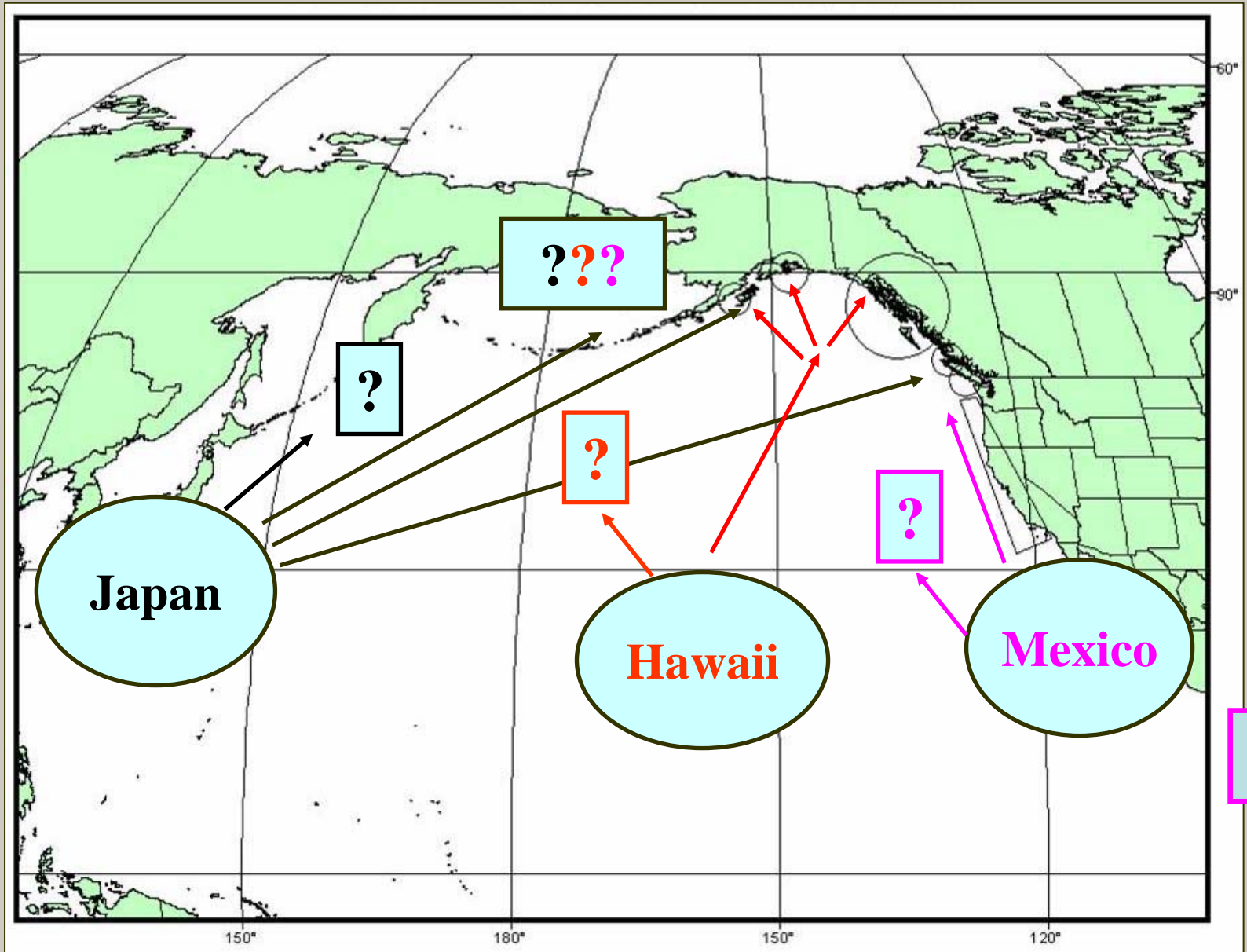
Historical Catch Data

Humpback Whale Catch - Old IWC datfiles:
to look at overall historical distribution (not densities)



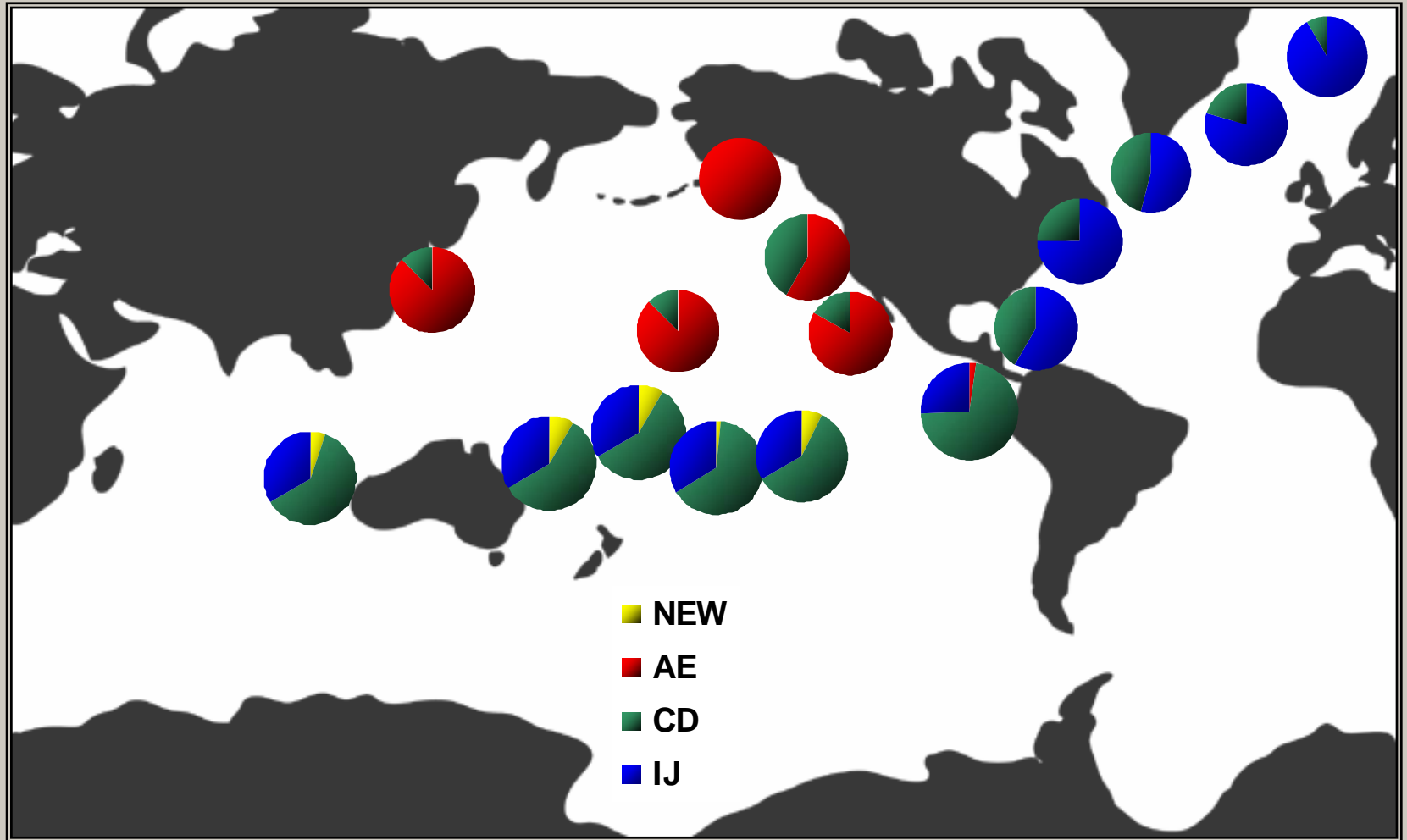


North Pacific Migratory Destinations



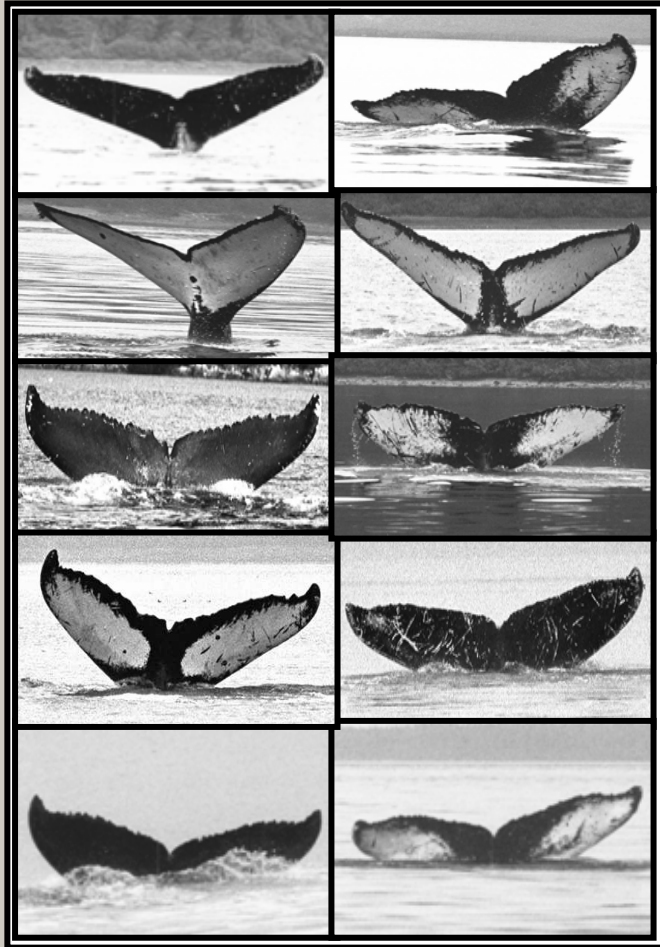


Clade proportion in Worldwide populations of humpback whales





Standardized Sampling, 2004-2006: Photo ID and Tissue Biopsy



- Determine sex
- Genetic structure and flow
- Hormones (pregnancy)
- Toxicology
- Feeding studies
- Archive for future



SPLASH: Primary Objectives

- Obtain a better current estimate of overall abundance for the North Pacific.
- Provide a better understanding of population structure and migratory interchange using genetic markers and photo-identification.
- Estimate abundances for specific wintering and feeding areas to better serve management needs.
- Provide information on trends in abundance.



SPLASH: Secondary Objectives

- Improve our understanding of population parameters including reproductive and mortality rates as well as age/sex structure and pregnancy rates.
- To describe the influence of population processes on genetic diversity and exchange.
- Identify habitat and characterize use.
- Identify human impacts (entanglement, toxicology, etc.).
- Foster international collaboration
 - Currently ~130 researchers working in 10 countries
- Leave a legacy of data and archived tissue



Human Impacts

Vessel strike





Health and Human Impacts: Scarring and tissue samples

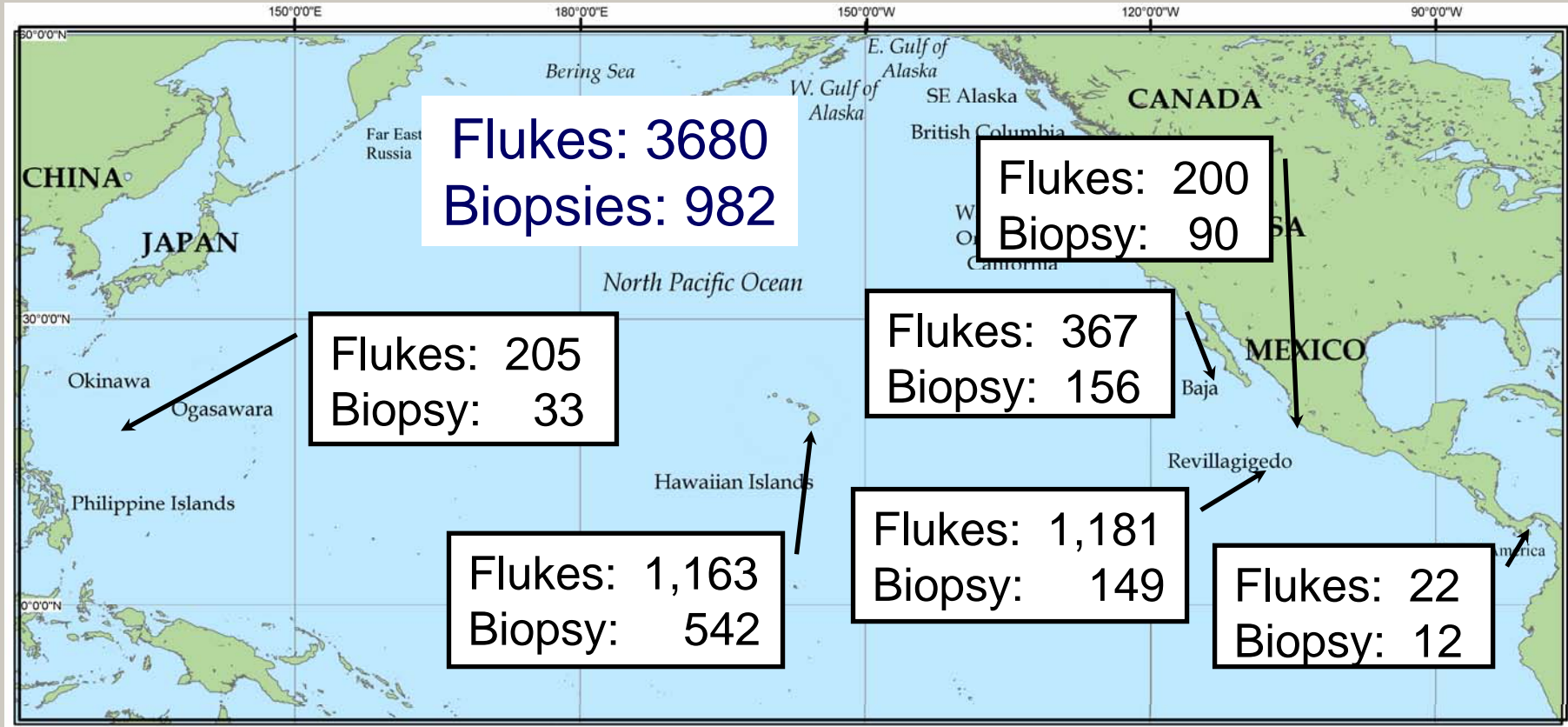


Entanglement



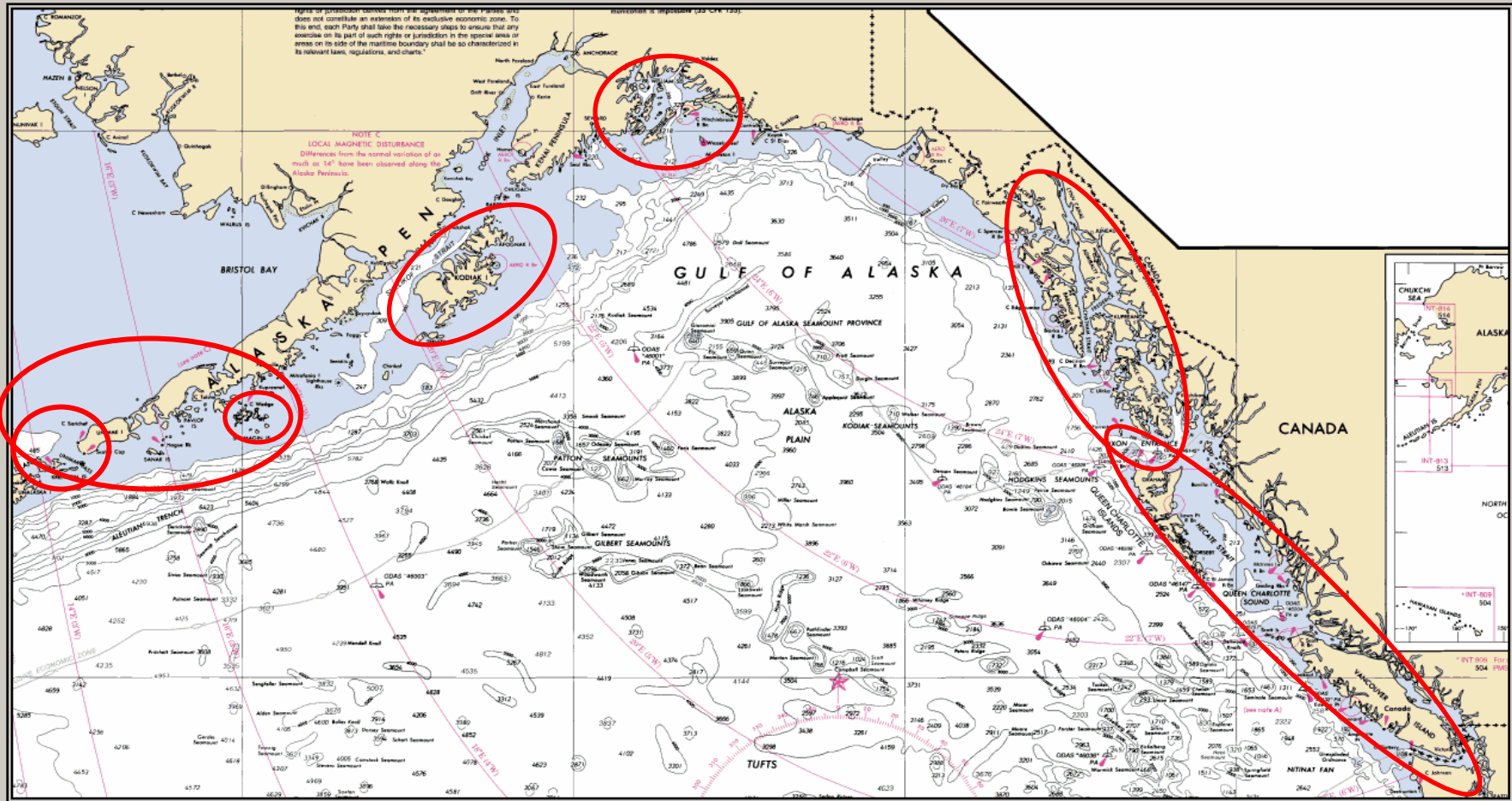


SPLASH, Winter 04: Results



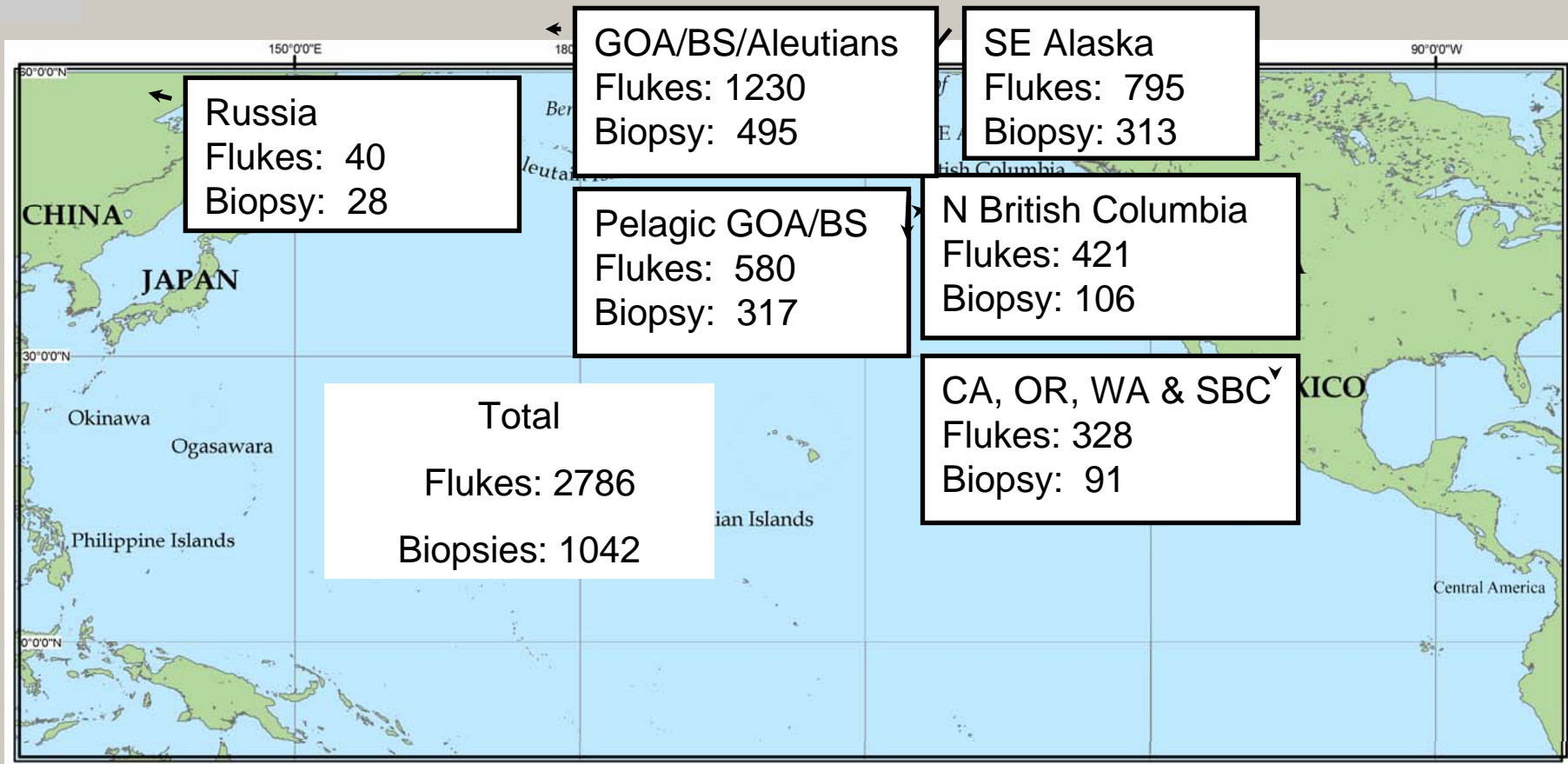


SPLASH, Summer 04: Coastal BC and Alaska





SPLASH, Summer 04: Results

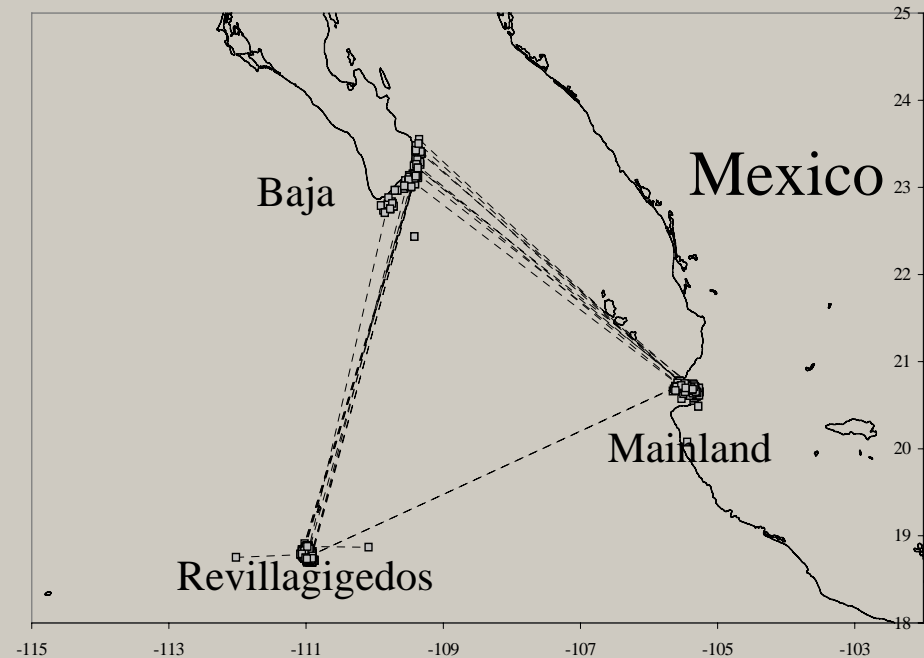
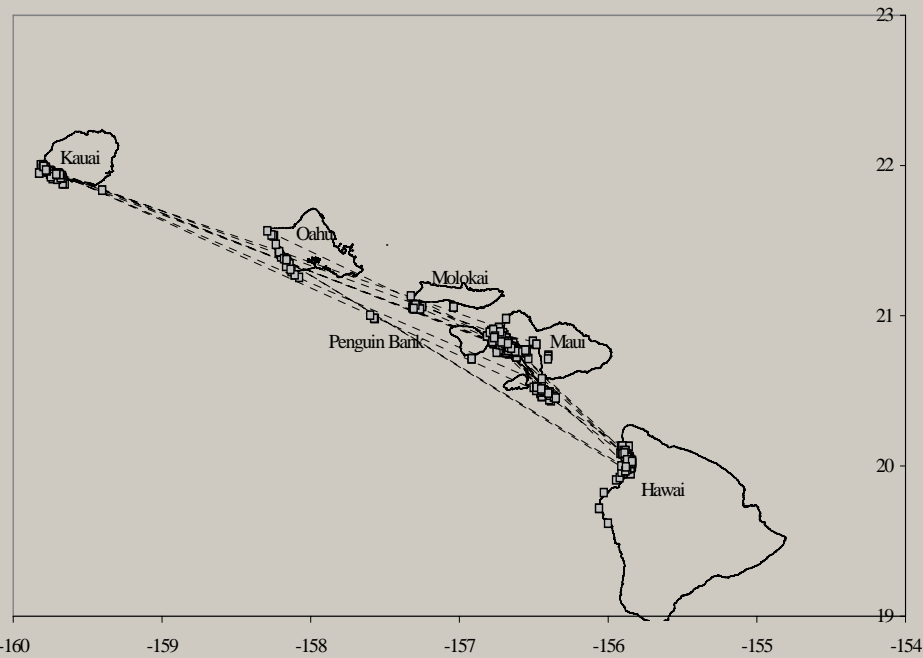




Interchange within wintering areas

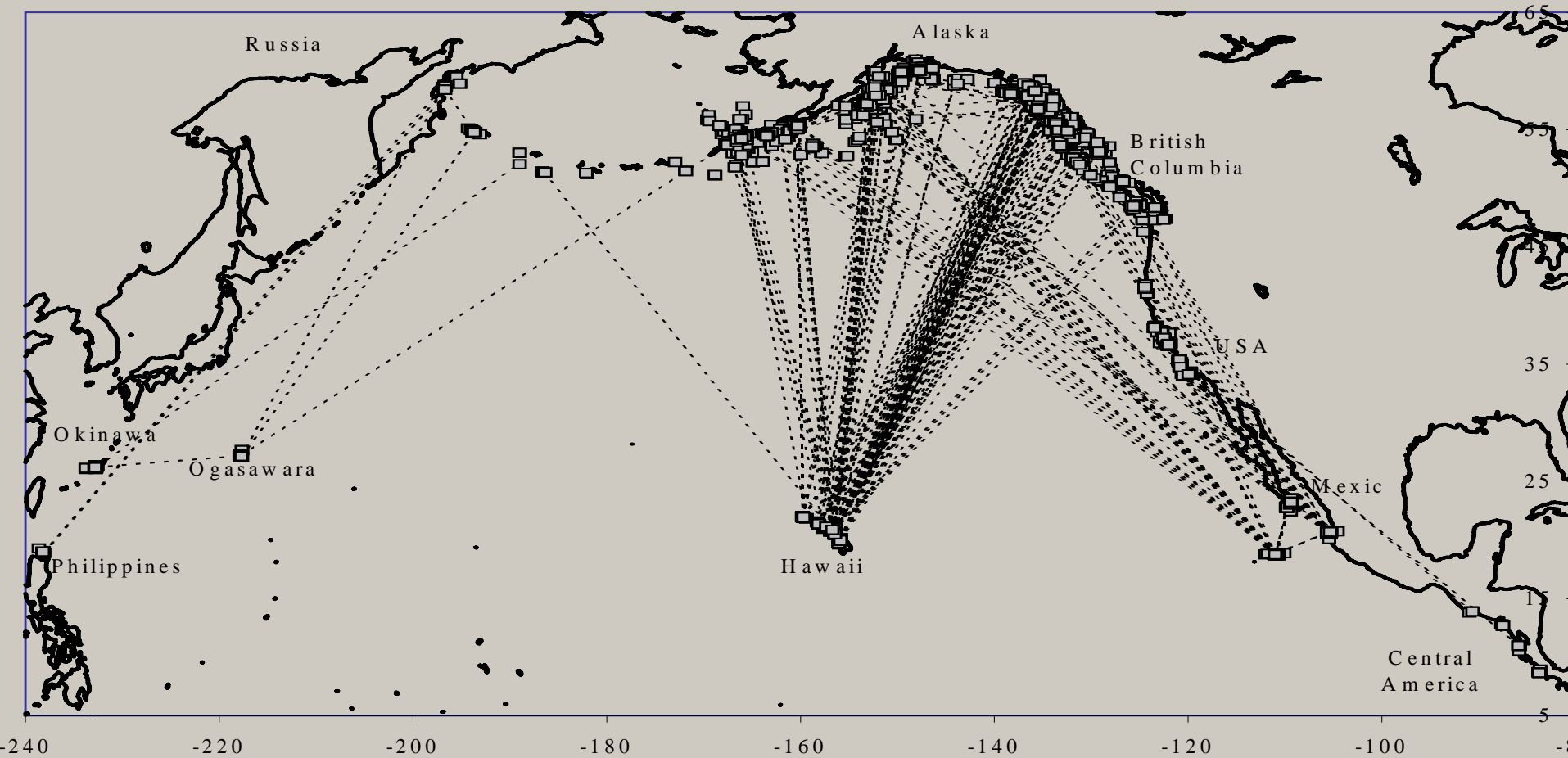
Hawaii

Mexico

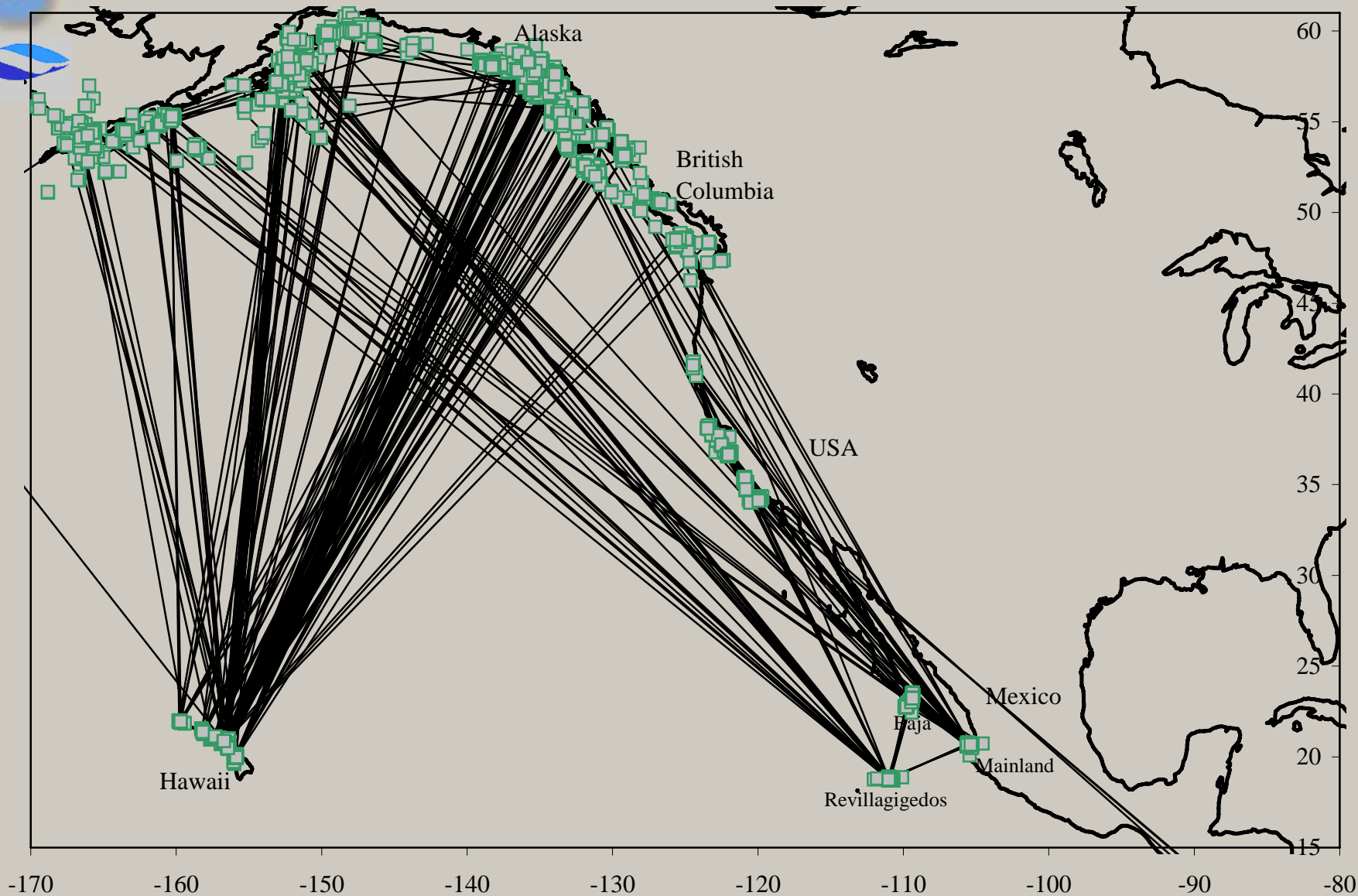




SPLASH 2004 movements

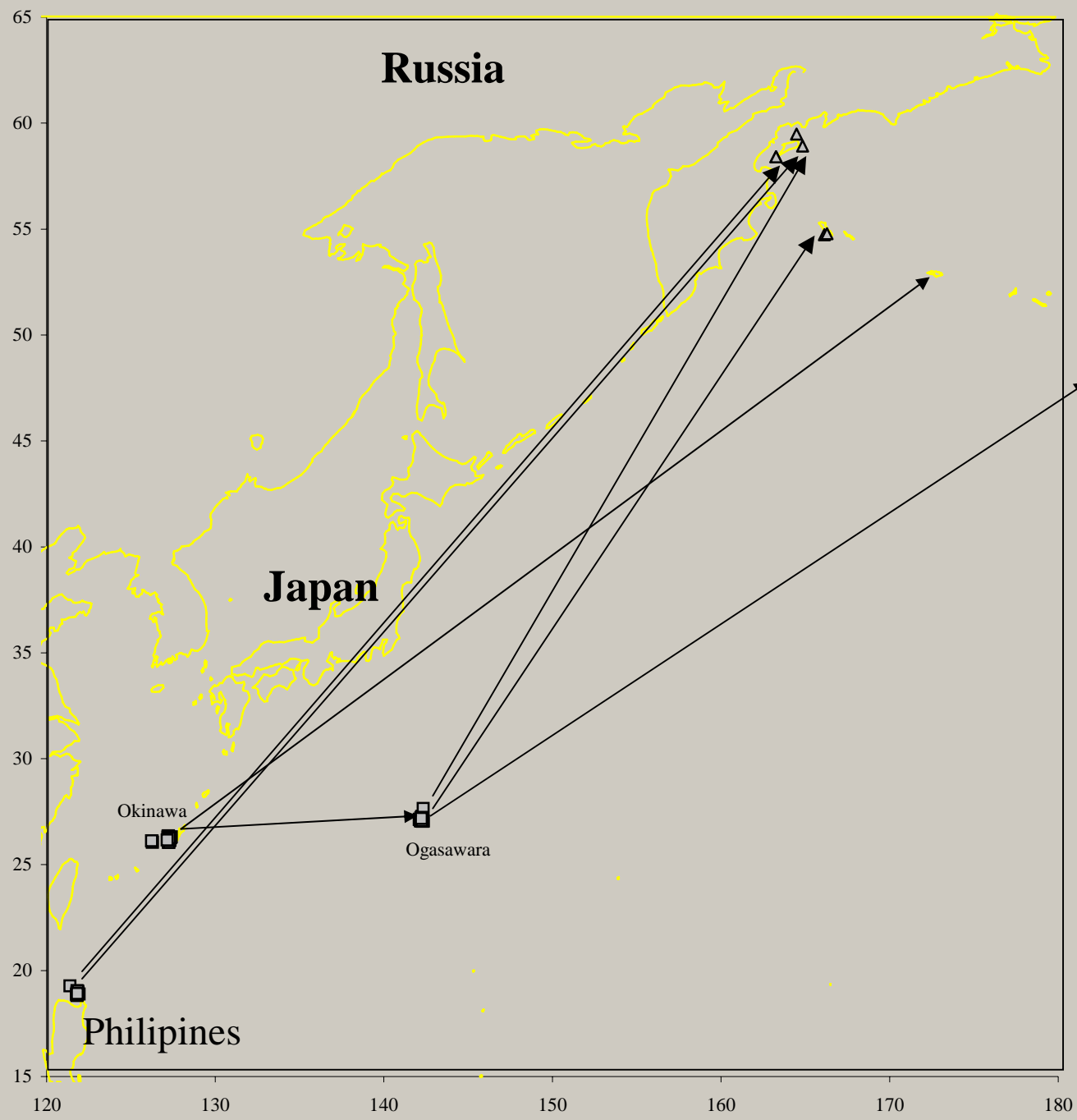


Migrations in E N Pacific – SPLASH 2004



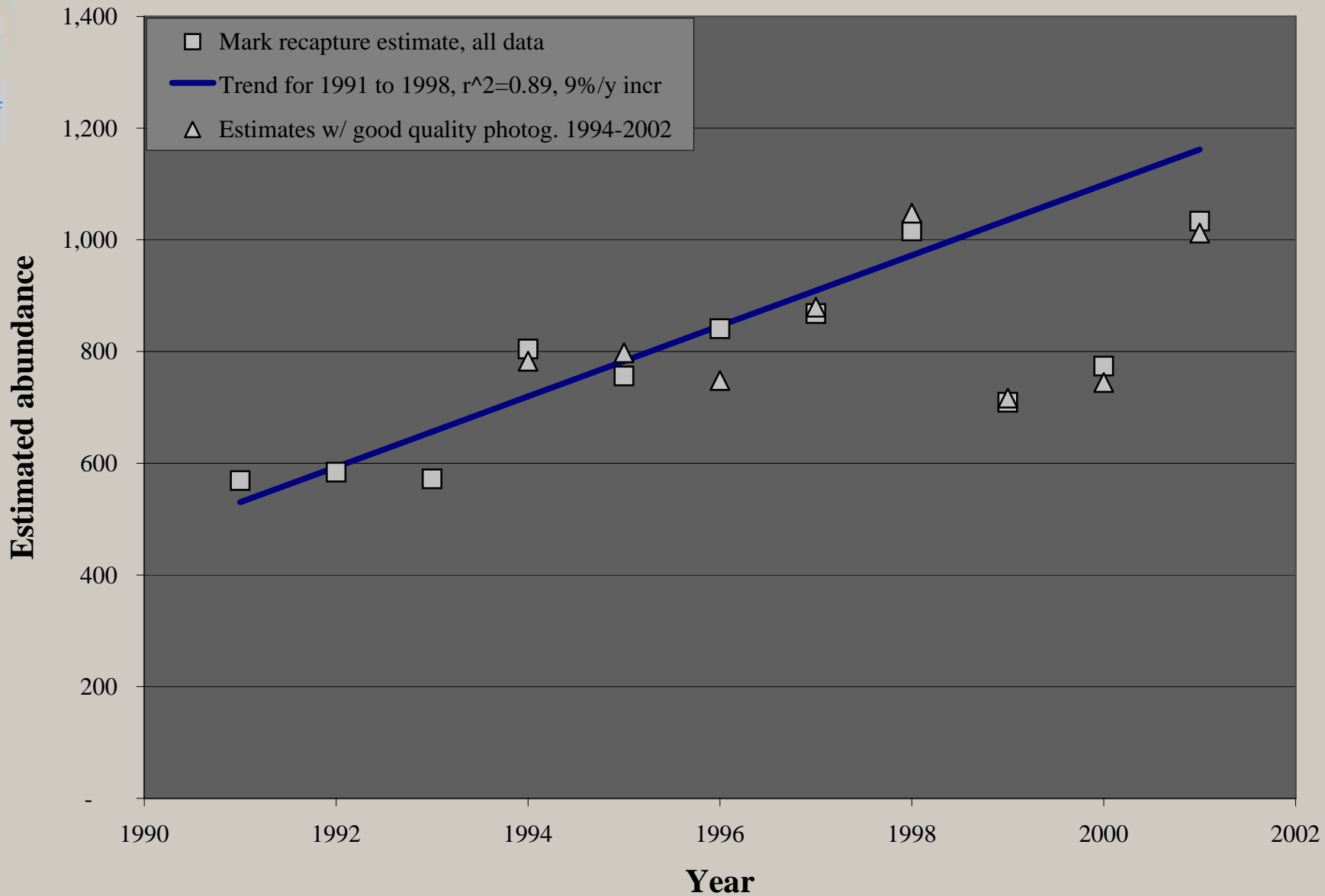


Movement of humpback whales in 2004 from Asian wintering grounds





Abundance of humpback whales off US West Coast





1,871 Humpbacks taken off two California whaling stations: 1919-1926

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MARINE MAMMAL SCIENCE, VOL. 13, NO. 3, 1997

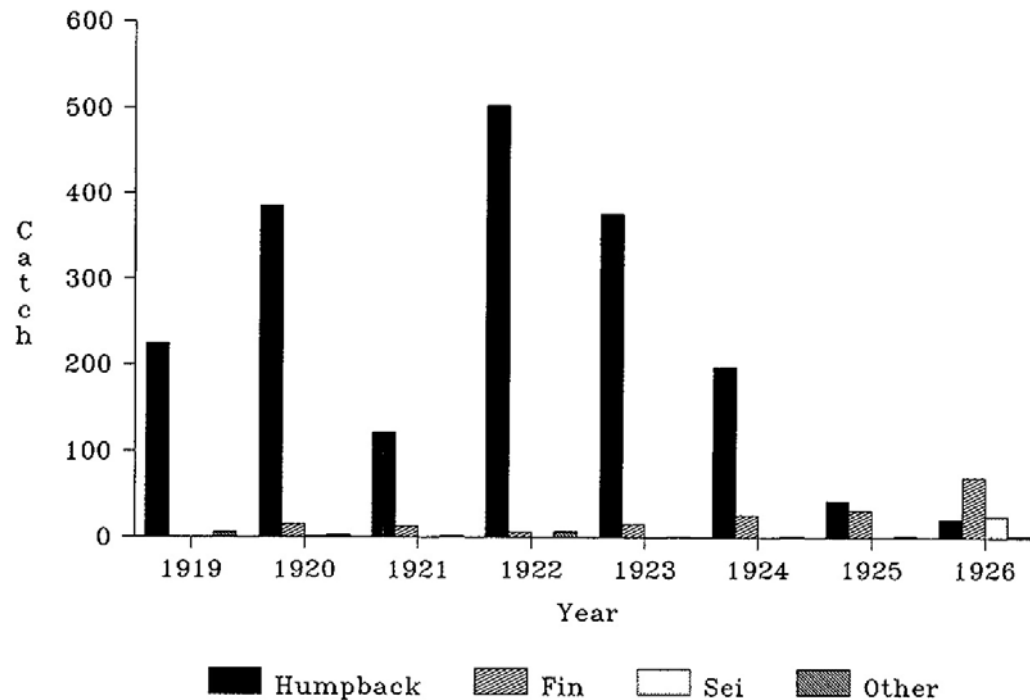


Figure 1. Total catch recorded at Moss Landing and Trinidad, 1919–1926, by species. Not included are 13 whales of unspecified type (probably humpbacks) taken at Trinidad in 1922.

