

# Review of False Killer Whale Assessments

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1

## False Killer Whale Assessment History

- 1995: first assessment- no abundance estimate, no PBR
- 2000: abundance for Main Hawaiian Islands, and estimate of fisheries interactions
  - > false killer whales strategic
- 2002: Hawaii EEZ survey results in new abundance estimate
  - > false killer whales strategic
- 2005: Palmyra & High-seas survey = new EEZ estimates; 2 stocks recognized: Hawaii & Palmyra
  - > Hawaii false killer whales strategic
- 2008: Genetics analysis reveals differences between insular and pelagic false killer whales, stocks split: Hawaii insular, Hawaii pelagic, & Palmyra
  - > Hawaii pelagic false killer whales strategic

2



# False Killer Whale Stocks

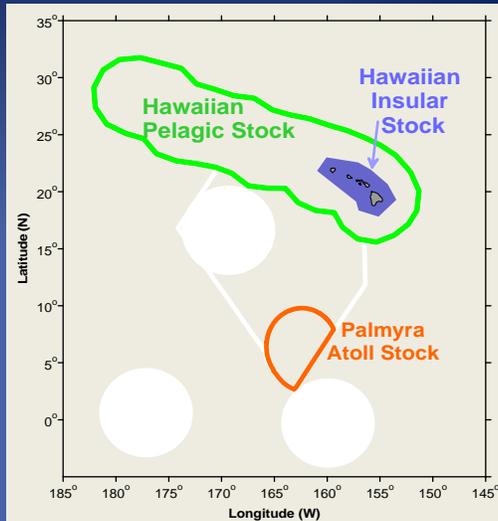
*Chivers et al. 2008, SWFSC Administrative Report LJ-08-04*

2008 SAR: 3 Pacific Islands  
false killer whale stocks

→ **Hawaiian Insular Stock**  
(Within ~75nmi from  
genetic sample  
distribution; SAR used  
outer longline fishery  
exclusion boundary).

→ **Hawaiian Pelagic Stock**  
(75 nmi to Hawaii EEZ)

→ **Palmyra Atoll Stock**

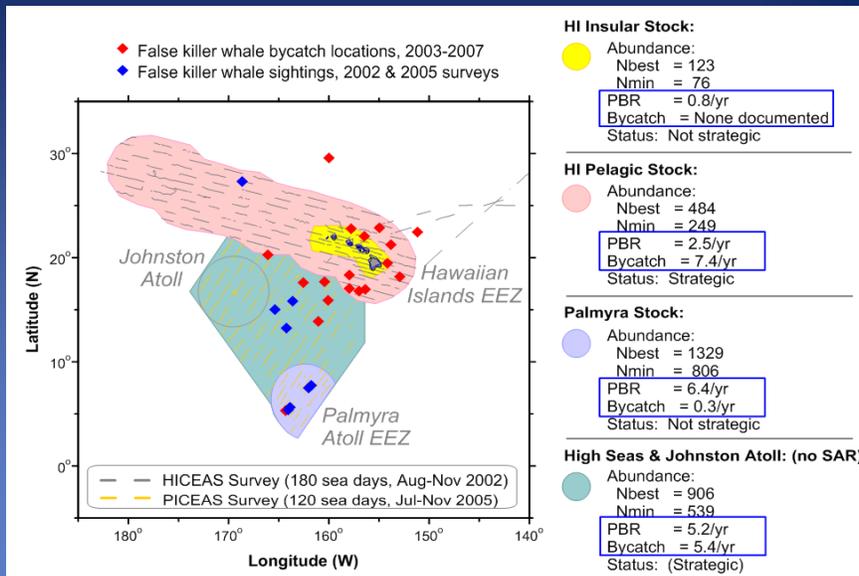


## Draft 2009 SAR

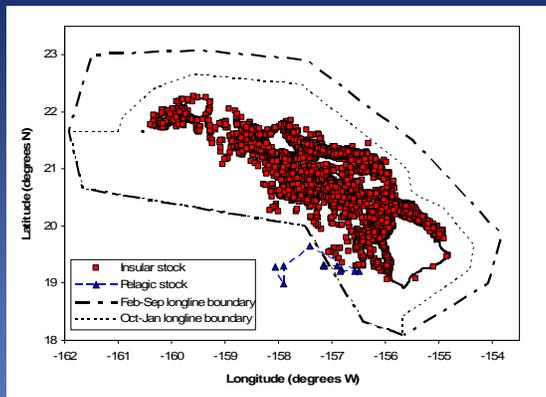
- New research updates:
  - suggested decline of insular stock since late-90s
  - Information on movements of insular & pelagic populations from telemetry studies, suggest potential overlap between insular stock and longline fishery
  - high levels of pollutants in insular stock
- Bycatch estimated separately for shallow-set and deep-set portion of longline fishery
- Occurrence of false killer whales and bycatch on the high-seas is quantified
  - > **Hawaii pelagic false killer whales strategic**

# False Killer Whale Stocks

## Draft 2009 SAR

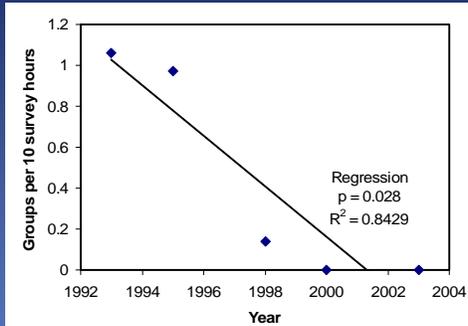


# Insular and Pelagic Stocks Overlap



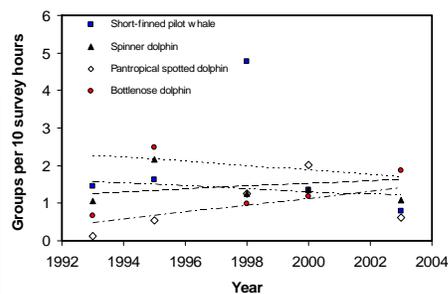
Satellite-tagging studies indicate overlap between pelagic and insular populations between 42km and 110km (Baird *et al* 2010, recent data)

## Apparent Decline of Insular Stock



- Aerial surveys sighting rates from late 1980s to present suggest decline in false killer whales

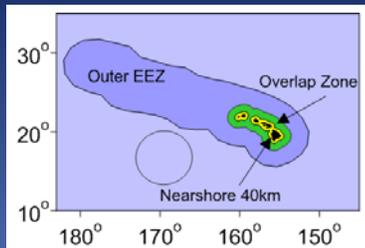
- Other species seen during surveys have not shown similar significant decline



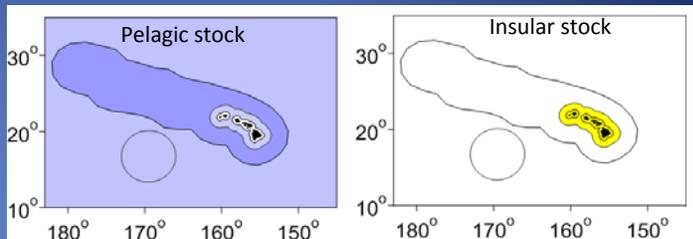
## Forthcoming Draft 2010 SAR

- Incorporating known range overlap of insular and pelagic stocks and revising bycatch allocation based on take location
- Acknowledging extension of pelagic stock into high-seas waters
- Reviewed by Scientific Review Group (Nov 2009)
- Expected to be released for public comment ~May 2010

## Insular & pelagic stock overlap zone



- Within overlap zone, bycatch assigned proportionately given density of each stock
  - Insular stock density =  
 $0.458 \text{ whales}/1000 \text{ km}^2 = 69\% \text{ in overlap zone}$
  - Pelagic stock density =  
 $0.203 \text{ whales}/1000 \text{ km}^2 = 31\% \text{ in overlap zone}$



11

## Current Situation

1. Hawaii pelagic stock of false killer whales remains strategic under MMPA.
2. Other stocks (Palmyra & Hawaii insular) are not strategic, but are known to interact or geographically overlap with longline fisheries

12

Questions?