

# Monitoring Leatherback Entanglement Risk on the U.S. West Coast



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NMFS ESA Permit No. 15634

# Monitoring and Research

To understand leatherback migrations, foraging ecology, abundance, population trends, and threats

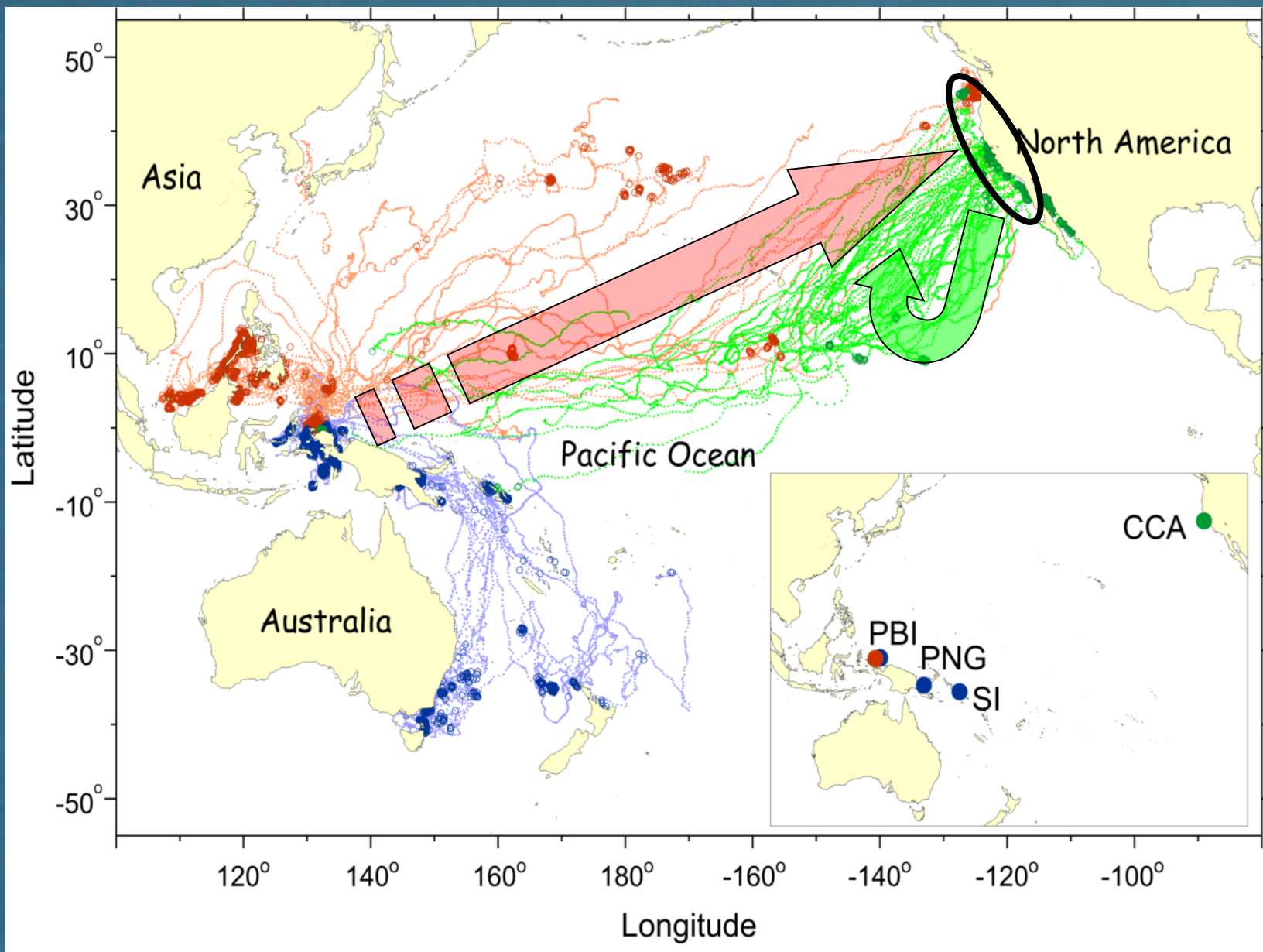
## Multidisciplinary Approach

- Genetics
  - population structure
- Satellite telemetry
  - migration, distribution, models
- Aerial surveys
  - distribution, abundance, trends
- Prey and habitat studies
  - Prey sampling, stable isotopes, remote sensing



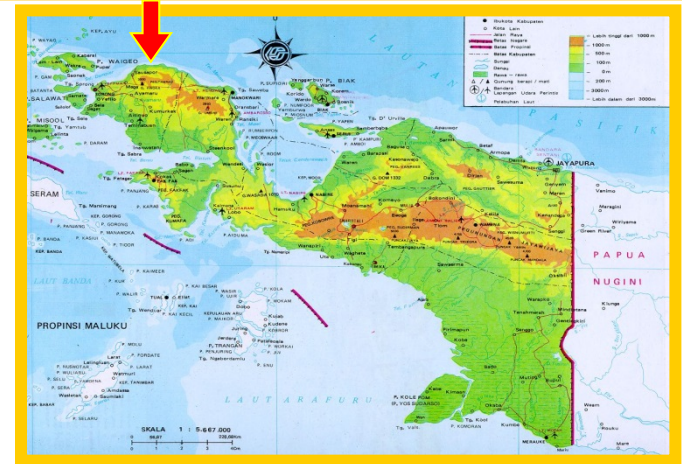
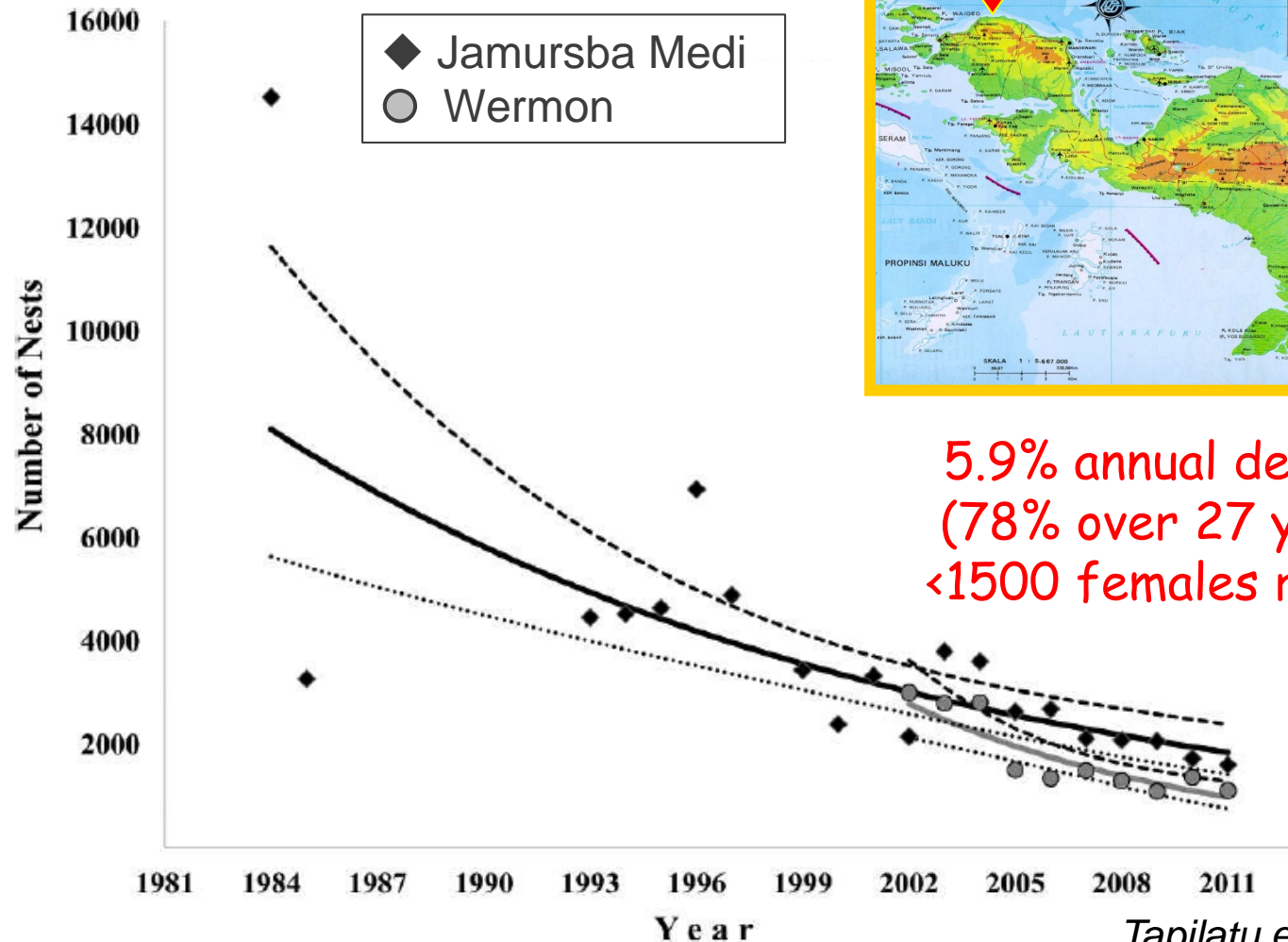


# "US West Coast" leatherbacks



# Trend in Nesting Leatherbacks, 1984-2011

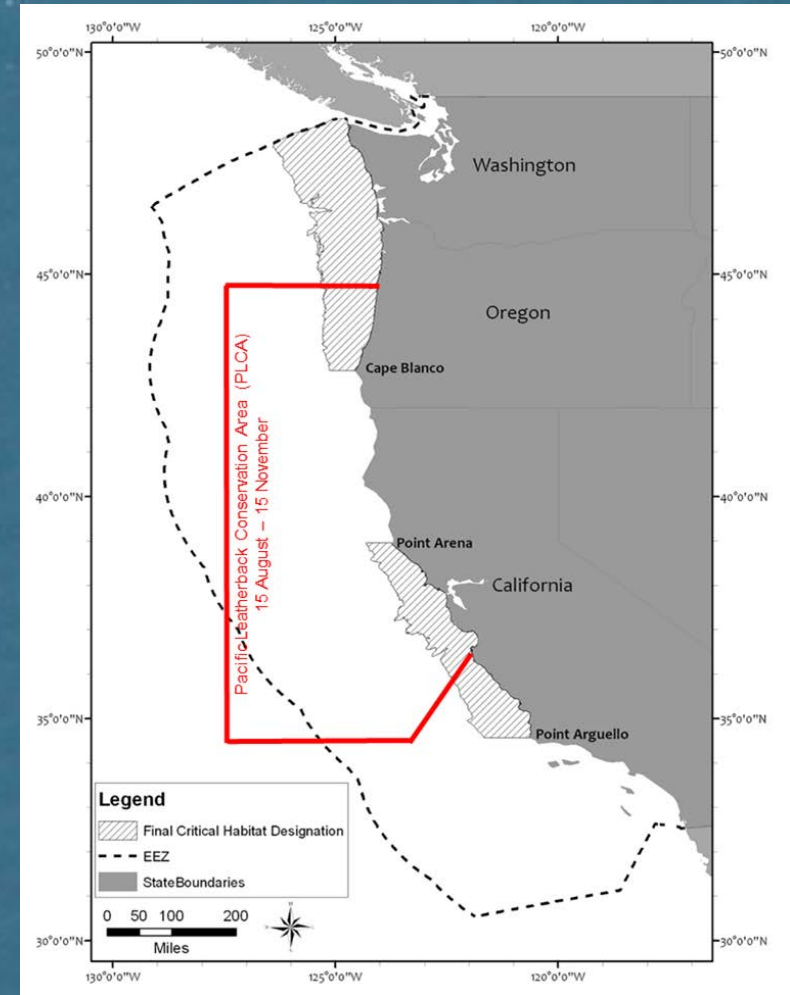
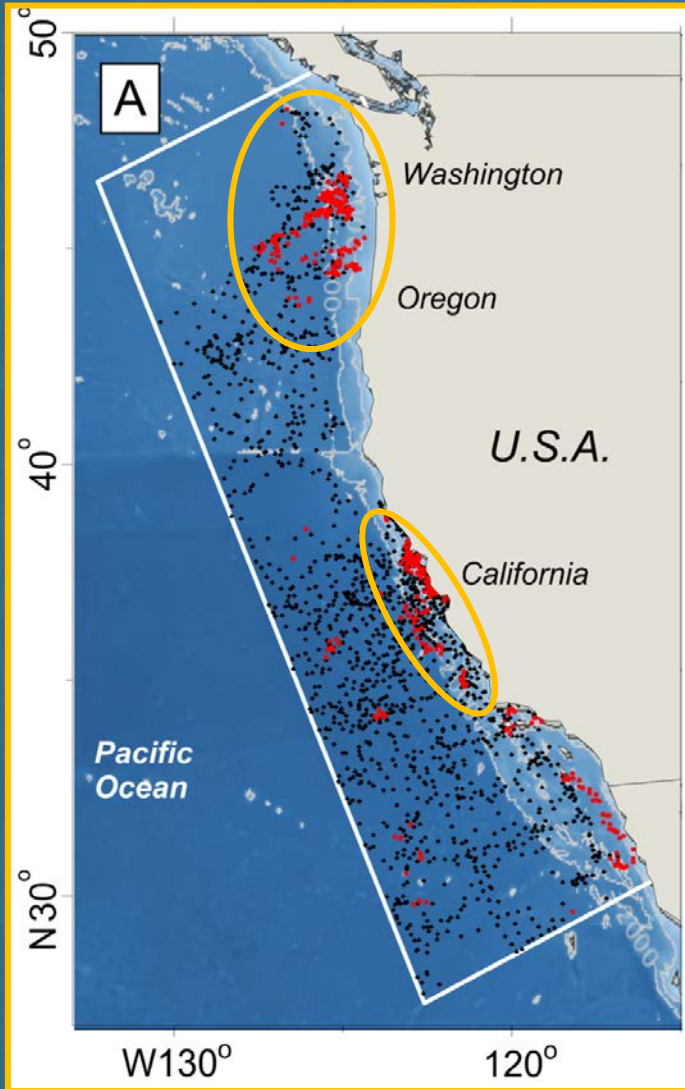
## Bird's Head Peninsula, Papua Barat, Indonesia



5.9% annual decline  
(78% over 27 years)  
<1500 females remain

*Tapilatu et al. 2013*

# U.S. West Coast foraging areas for leatherbacks

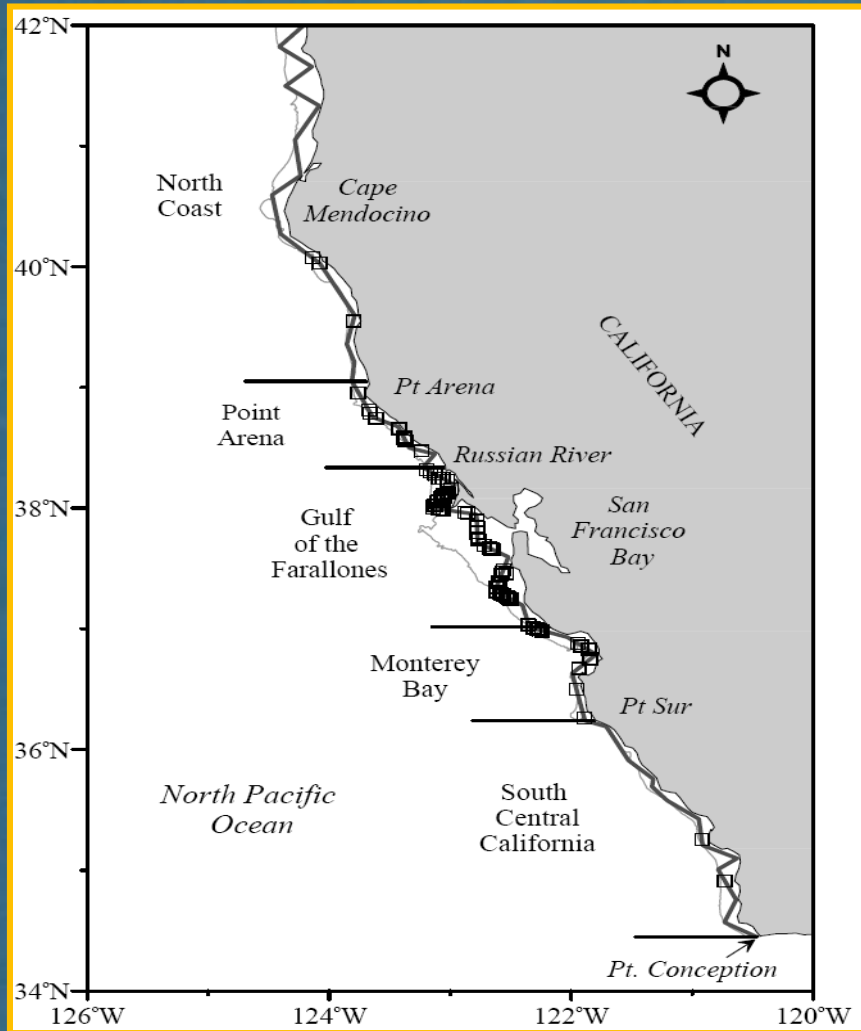


Critical habitat (gray shading) and  
Pacific Leatherback Conservation Area

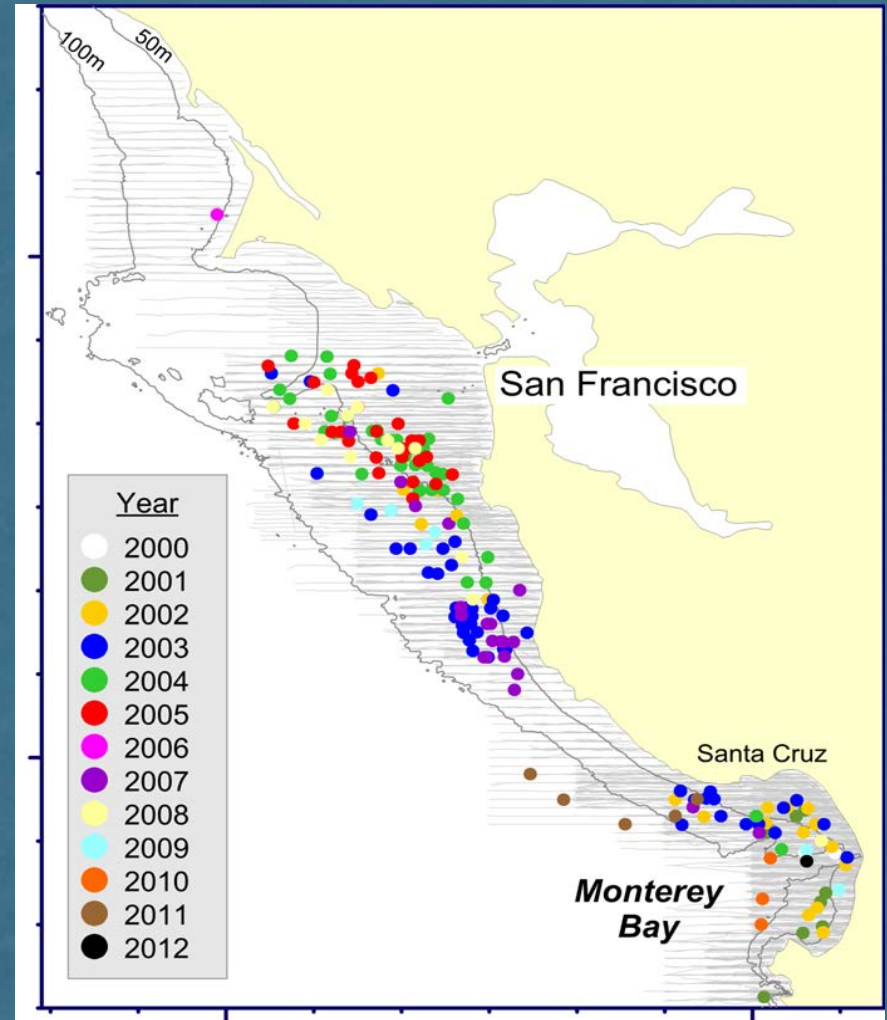


# Leatherback distribution off California

Long-term (1990-2016) aerial surveys along central and northern CA coast (see Benson et al. 2007)



Fine-scale surveys off central CA in leatherback foraging 'hotspots' (vary by year)

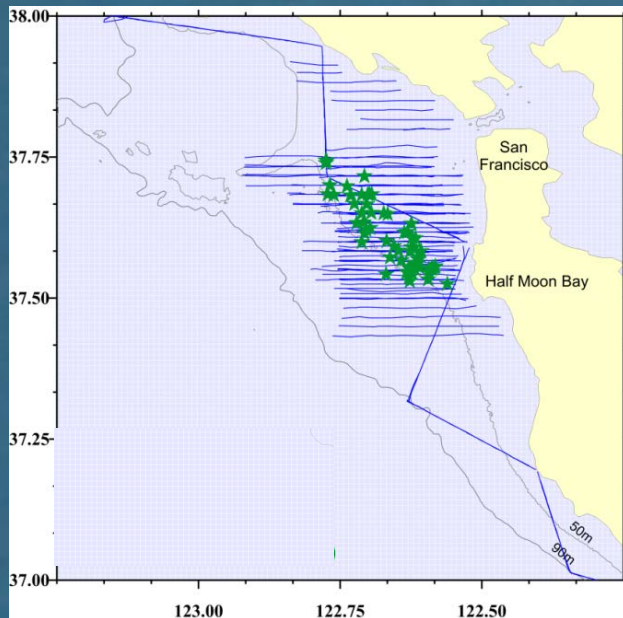


# Monitoring to reduce leatherback entanglement risk in fixed gear fisheries

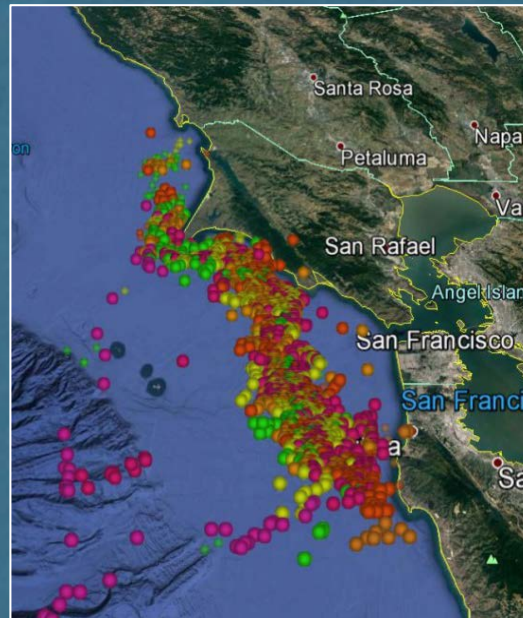


- GOOD NEWS: We have the research and monitoring capacity
- Tagging and aerial surveys can provide the data we need

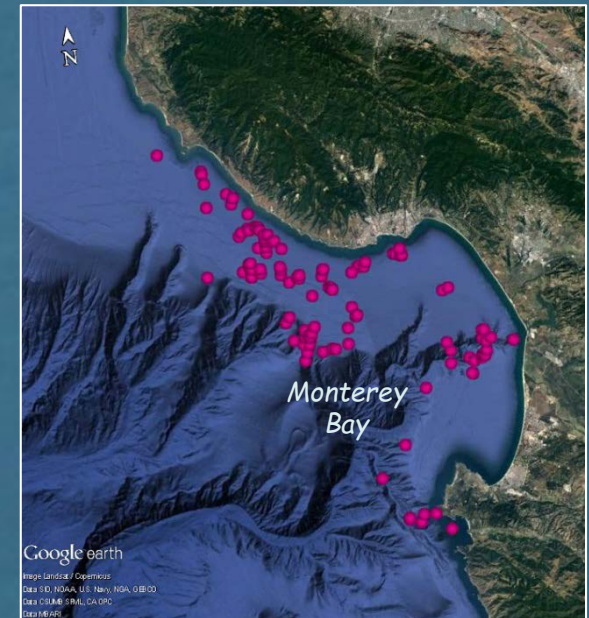
September 2016:  
Aerial survey sightings of  
leatherback turtles

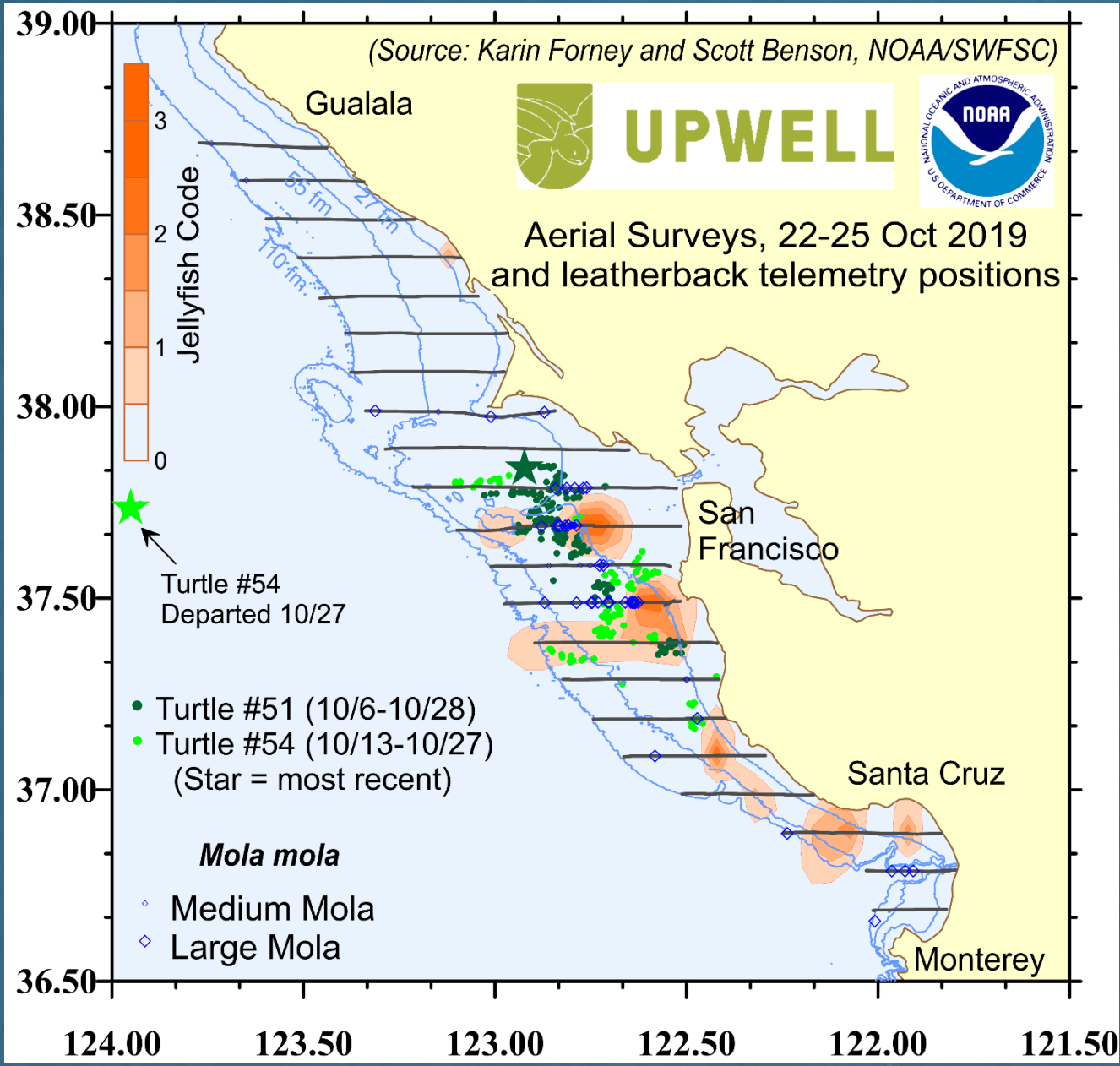


Sep - Nov 2016:  
telemetry locations  
(5 leatherbacks)



June 2017: telemetry  
locations for 1 returning  
leatherback







# Oregon/Washington Leatherback Records

..... telemetry positions from 3 leatherbacks tagged at nesting beach, 2003-2007

- Sightings during NOAA Aerial surveys (Fall 2003, 2004, 2010 and 2011); transect lines shown in blue
- ◆ Opportunistic sighting records (April-June, July - September)
- ◆ Bycatch in experimental driftnet fishery (1986-88)

