

# WHALES & SEAMOUNTS

Importance of Middle Bank to Humpback Whales  
Reserve Advisory Council  
Research Subcommittee  
Neal Langerman, Ph.D.

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## WHALES & SEAMOUNTS

- Seamounts are an important habitat of Humpback Whale behavior
  - Middle Bank visitations
  - Whales, Migrations, and Seamounts



# WHALES & SEAMOUNTS

- Research Methods
  - Satellite Tagging
  - Wave Glider Acoustic Monitoring
    - Passive Acoustic Monitoring

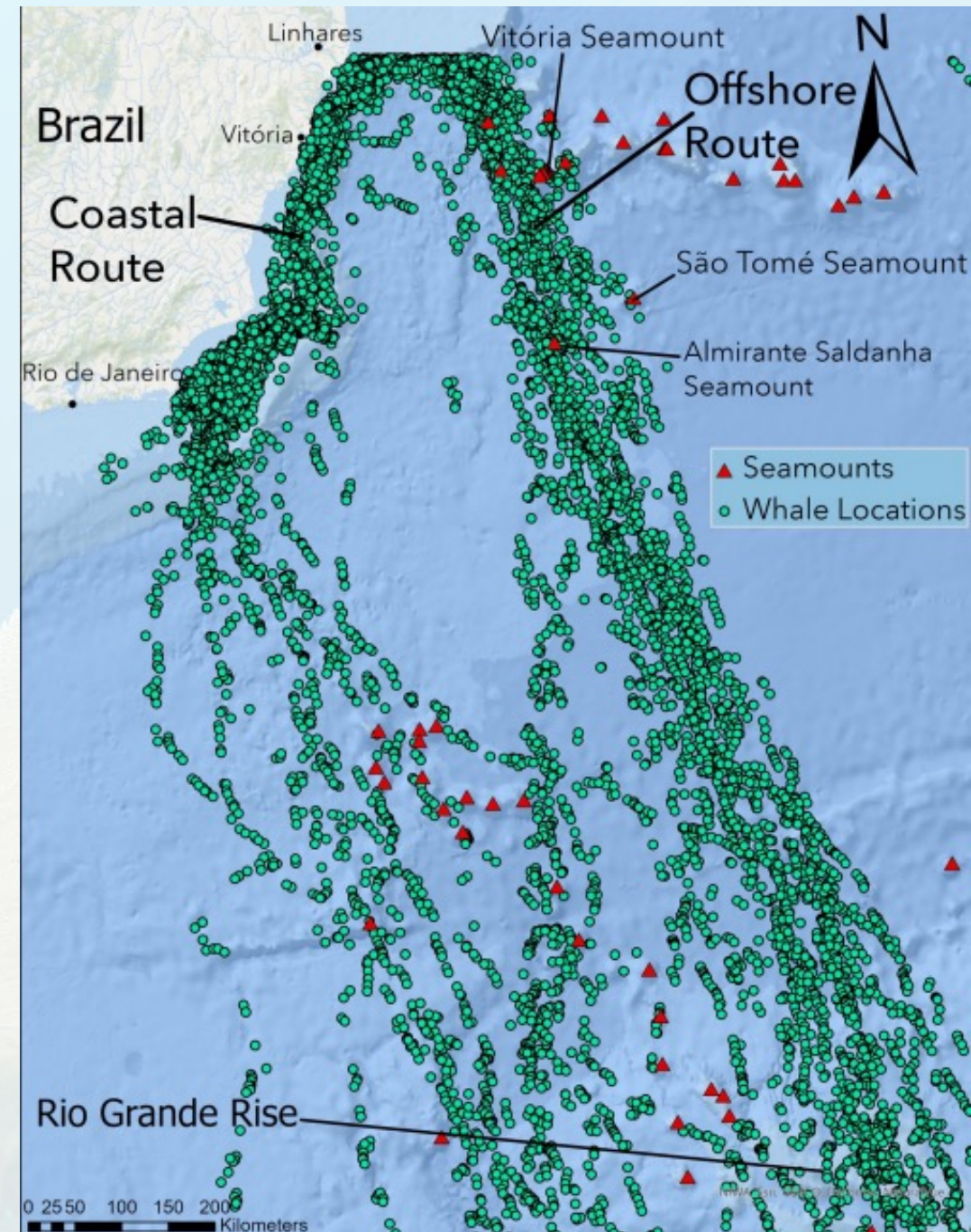


SRMAM 2021



# WHALES & SEAMOUNTS

- Seamounts are an important element of Humpback Whale behavior
  - this population of humpbacks leave the Brazilian coast using two different paths, cross over multiple seamounts, including the Rio Grande Rise, and most of them use a direct path to their feeding grounds.
    - Clare Thouless, “Where Whales Go: Migration Routes of Humpbacks in the Southwest Atlantic”, 10 June 2021





## WHALES & SEAMOUNTS

- While in Hawaiian waters, the majority of locations were in the Maui Nui region. Penguin Bank was another area heavily frequented by the tagged whales, while a few animals ranged into waters of the Papahānaumokuākea Marine National Monument, mostly near Middle Bank.
  - Bruce R. Mate, Daniel M. Palacios, C. Scott Baker, Barbara A. Lagerquist, Ladd M. Irvine, Tomas M. Follett, Debbie Steel, and Craig E. Hayslip, “Humpback Whale Tagging in Support of Marine Mammal Monitoring Across Multiple Navy Training Areas in the Pacific Ocean: Preliminary Summary of Field Tagging Effort in Hawaii in March 2019” 15 August 2019

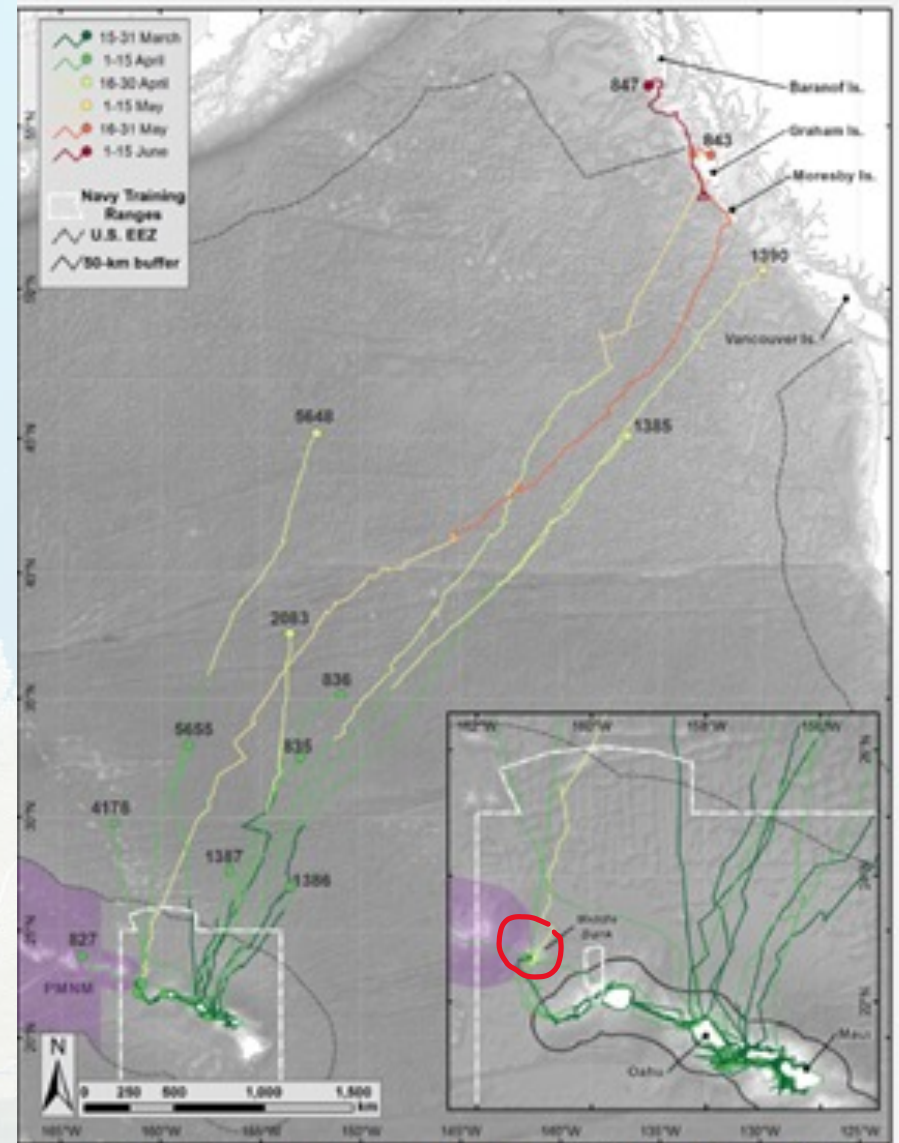


Figure 1. Satellite-monitored tracks of humpback whales tagged off Maui, Hawaii, in March 2019. The main fi

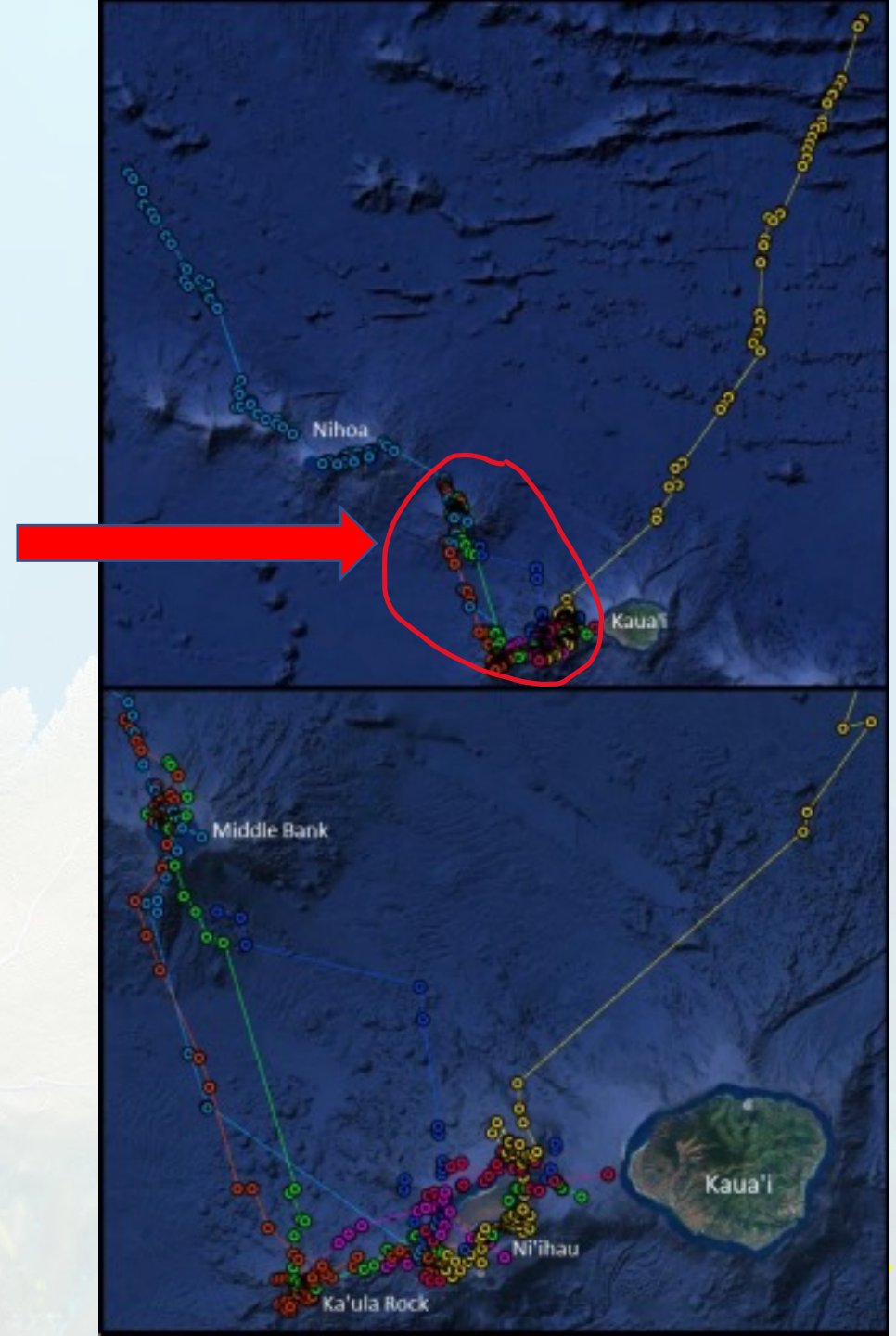
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- Humpback whale songs were detected at every bank or shoal that the Wave Glider visited during its voyage from January 8 to March 14, 2020.
- Middle Bank, had the highest prevalence of whale song.



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- The whales circled Ni'ihau for 1.0–7.9 days. Five whales continued to travel west/northwest, with directed travel over deep water while milling over shallow seamounts and near islands, including Ka'ula Rock, Middle Bank, and Nihoa.
- E. Elizabeth Henderson, Jessica Aschettino, Mark Deakos, Gabriela Alongi, Tara Leota. "Satellite Tracking of Migrating Humpback Whales in Hawai'i" July 2018



## WHALES & SEAMOUNTS

- Full content of research papers available at:
  - [https://drive.google.com/drive/folders/1VoX8Cxf\\_tR68QFkSjMn0H15HXHsUAnYs](https://drive.google.com/drive/folders/1VoX8Cxf_tR68QFkSjMn0H15HXHsUAnYs)
- Seamounts are now recognized as important features of Humpback Whale behavior.
  - Feeding
  - Reproduction
  - Navigation
- Middle Bank is an essential habitat for Humpback Whales