

Tidal Phase Effects on Marine Bird Abundance & Distribution in San Juan Channel

Claire Girard, Kat McCarroll, Audrey Taber

Introduction

Marine birds are important measures of marine feeding ecosystems

San Juan Islands apex species

San Juan Islands are greatly influenced by tidal currents



Introduction

Tidal coupling: interactions resulting in prey aggregation

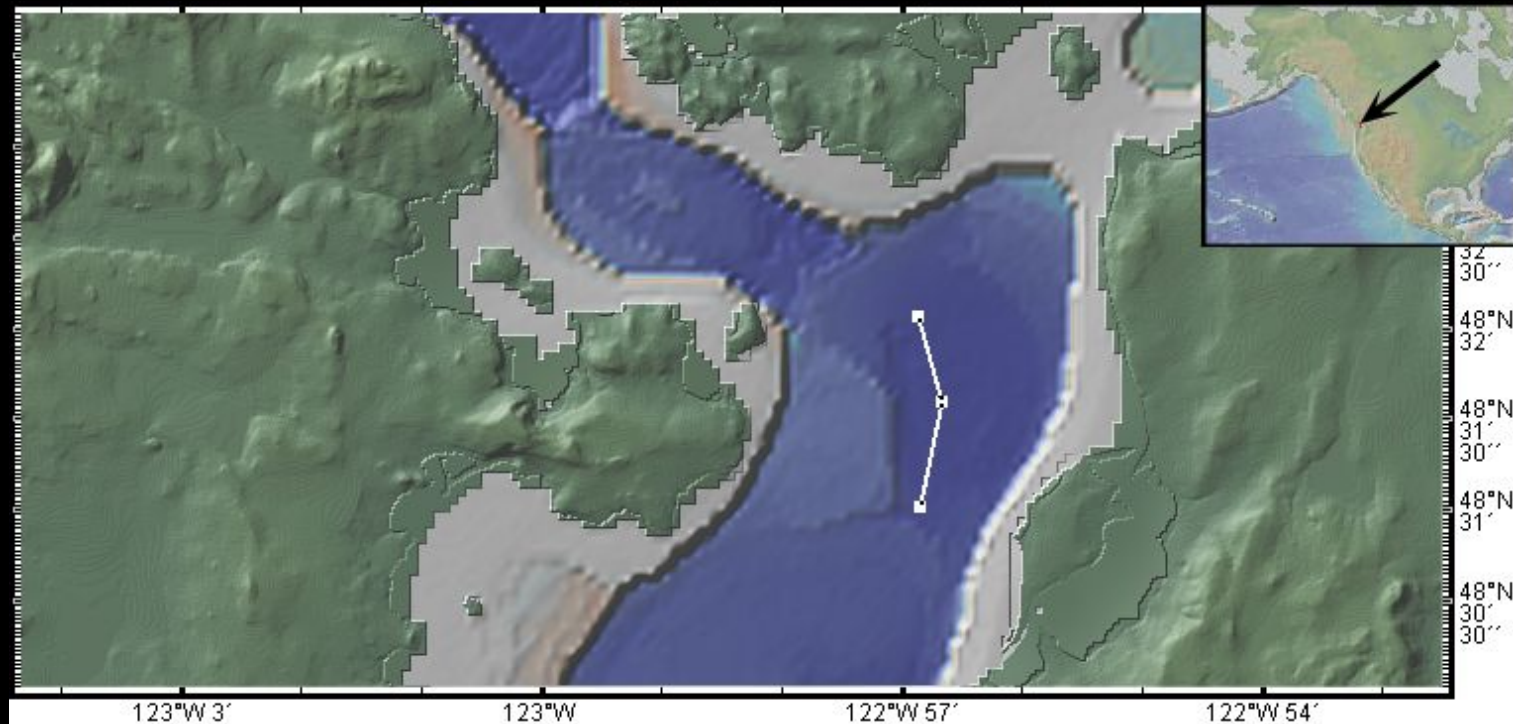
Many studies, however inconclusive due to differences in techniques

Fine scale temporal sampling

Objectives

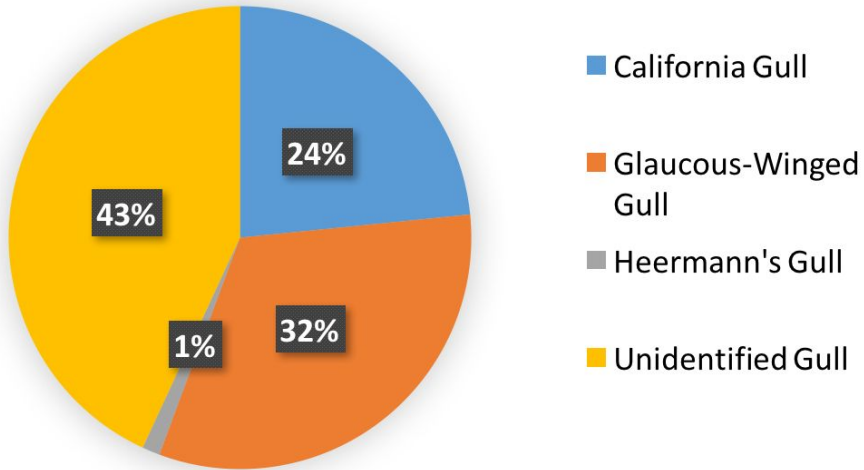
- 1) We assessed effects of tidal phase on bird abundance
- 2) We examined bird location in relation to tidal phase

Zone 3

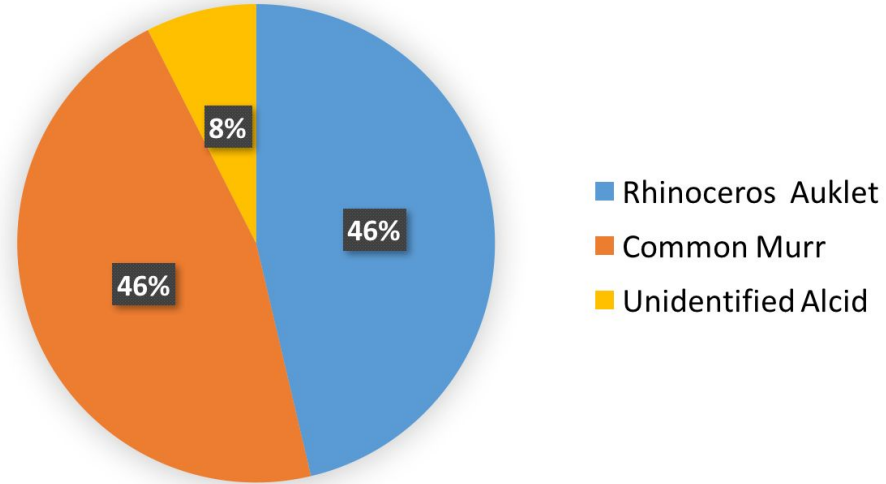


Methods: Marine Bird Counts

Laridae



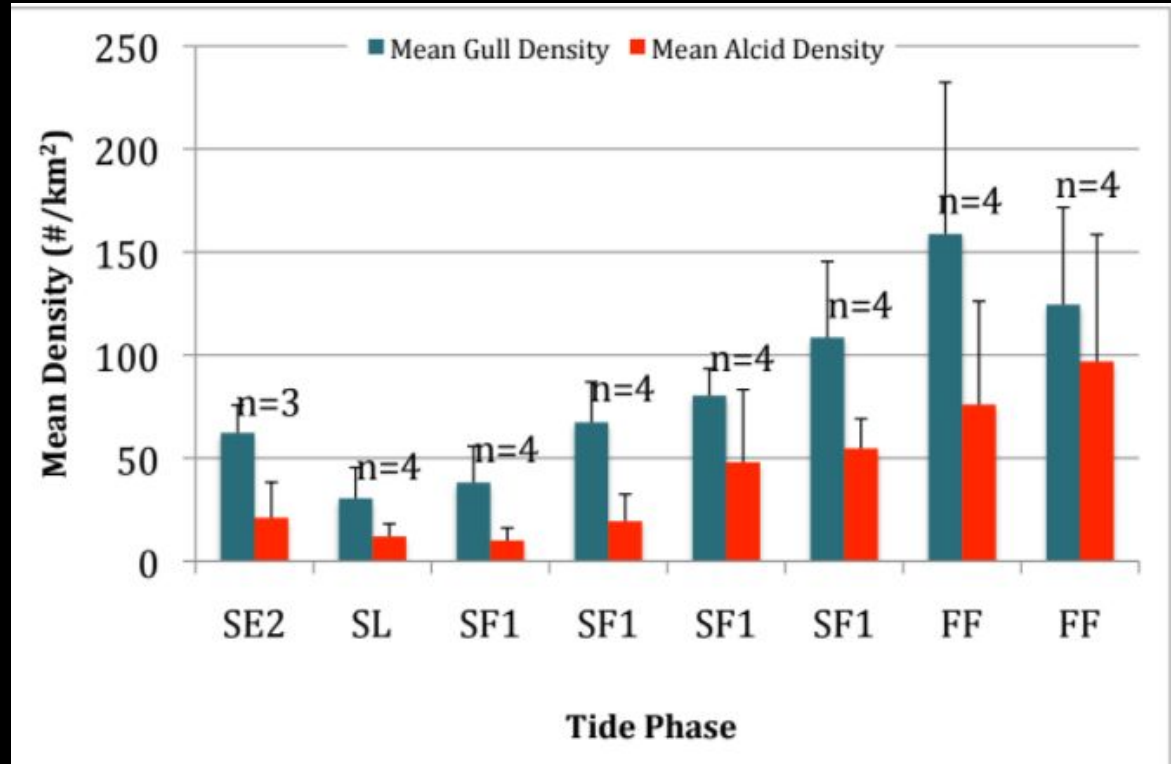
Alcidae



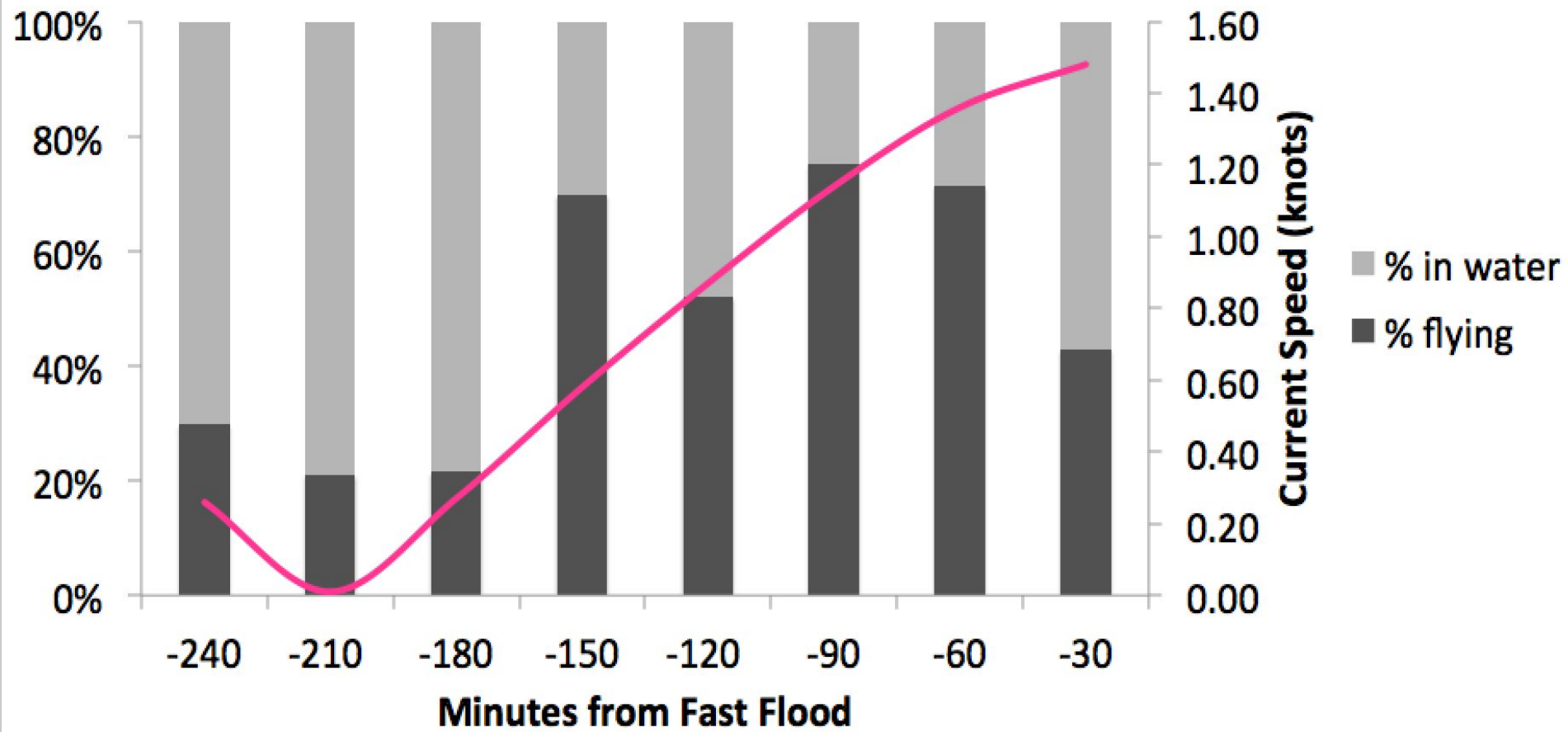
Noted "on water" or direction of flight

Methods: Summarizing our Data

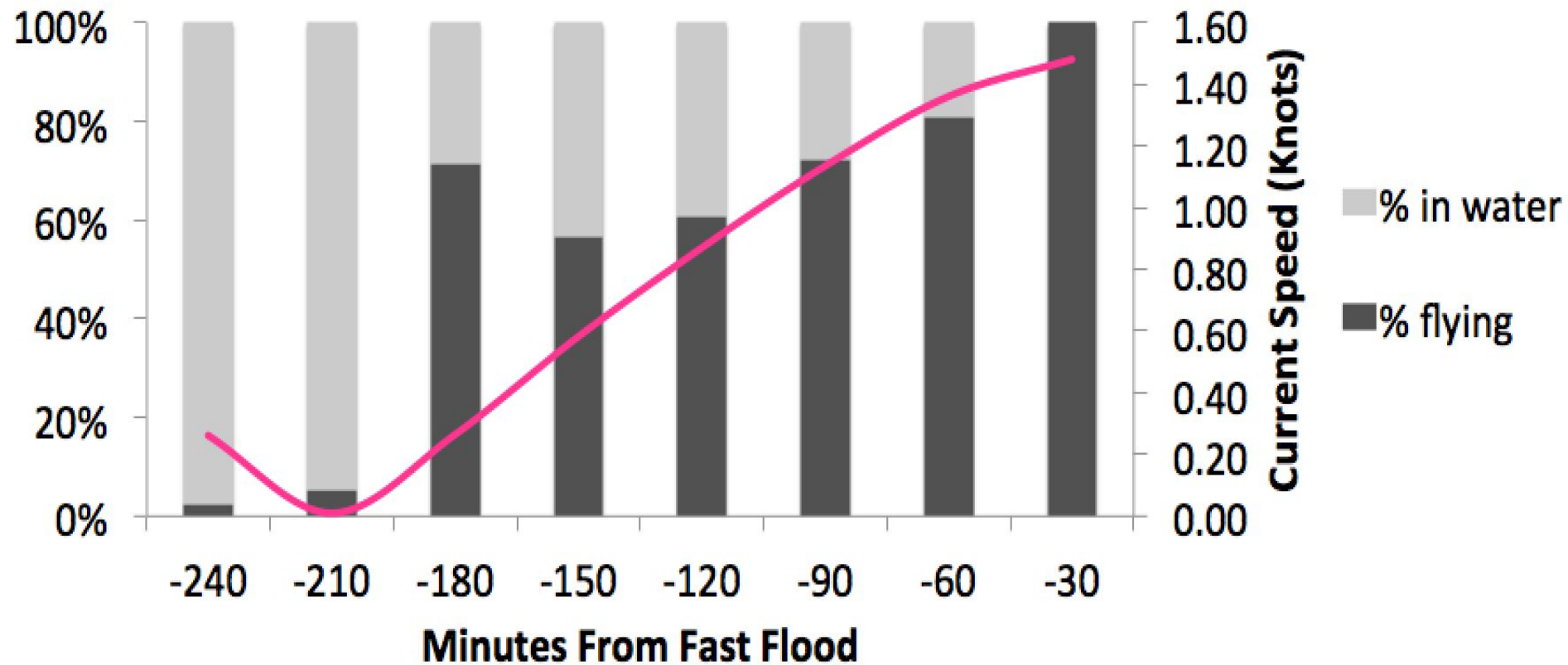
Eisenlord 2012



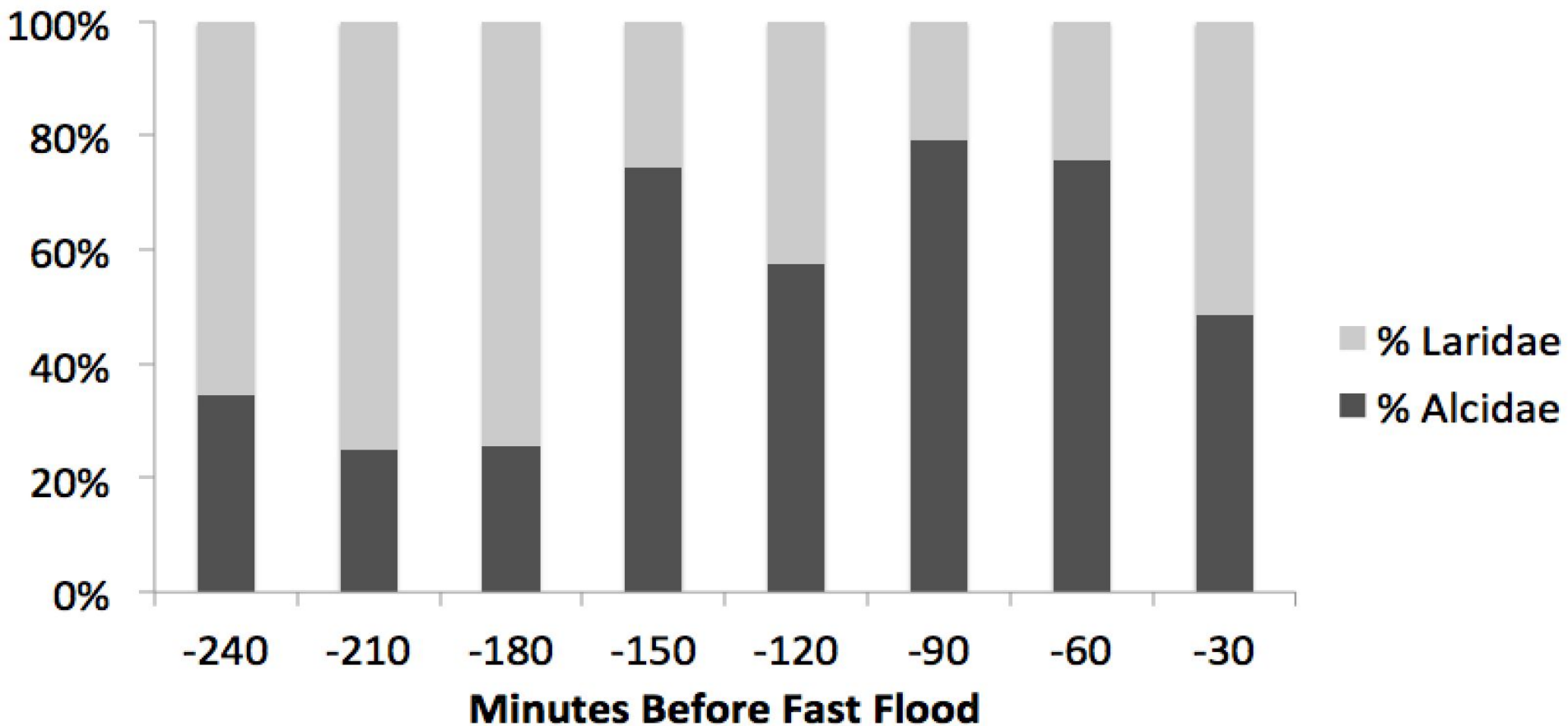
Laridae



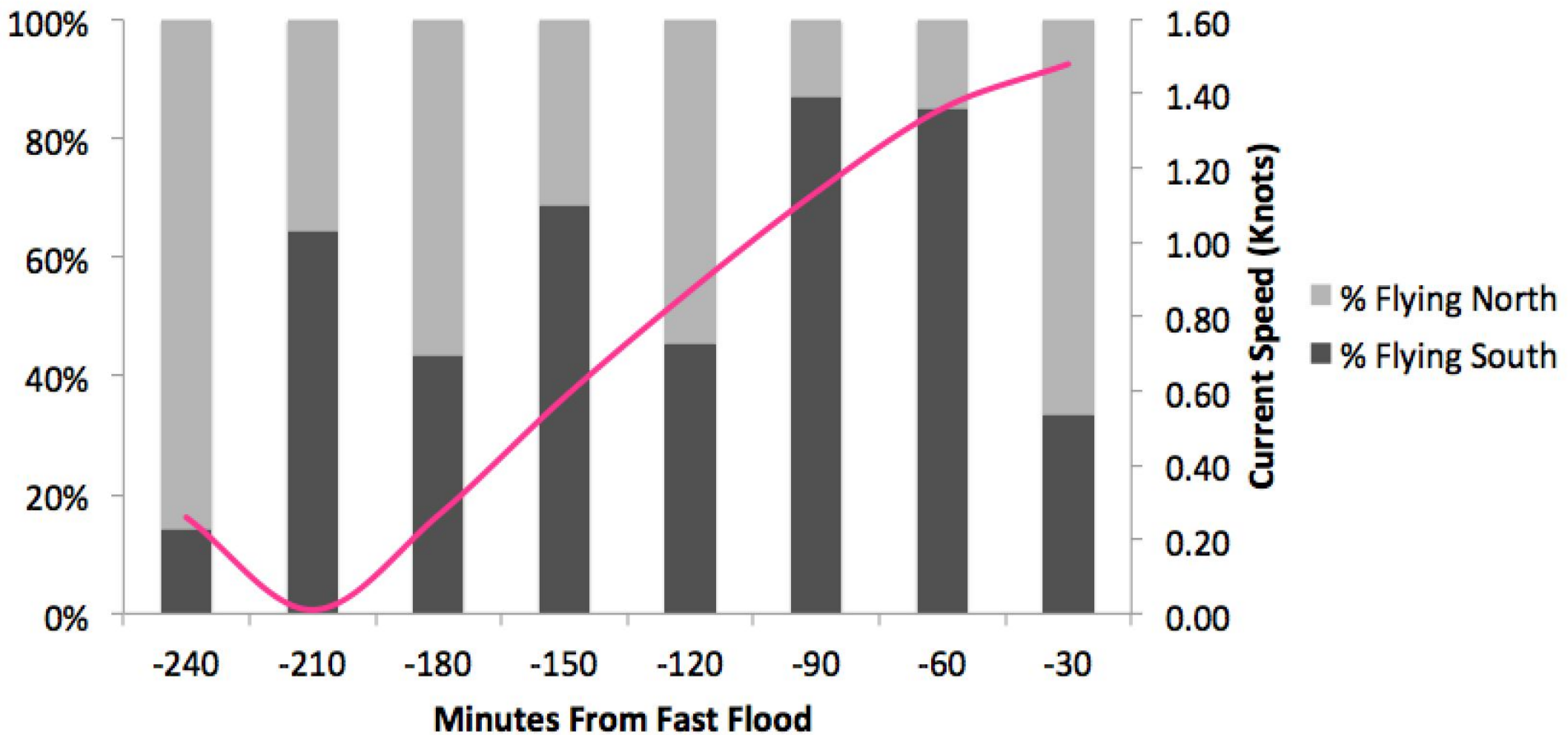
Alcidae



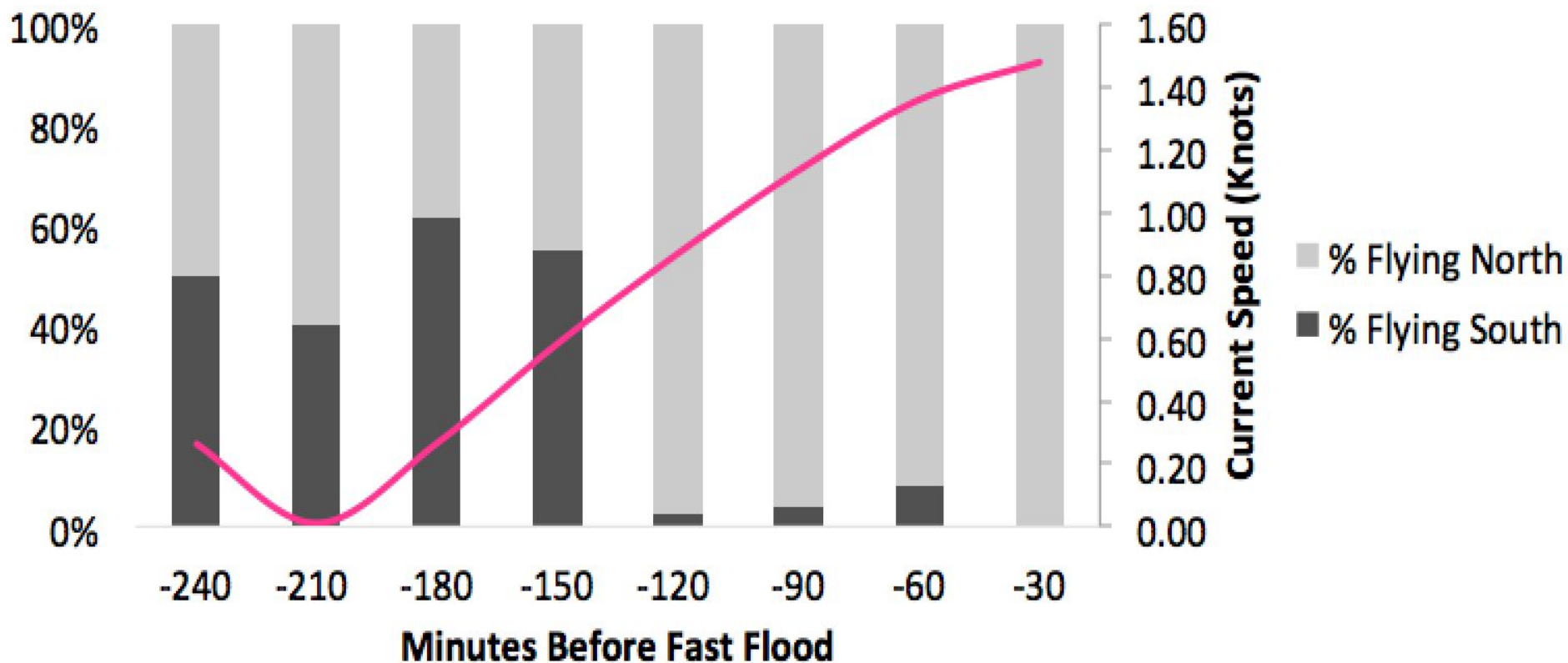
Distribution in Water



Laridae



Alcidae



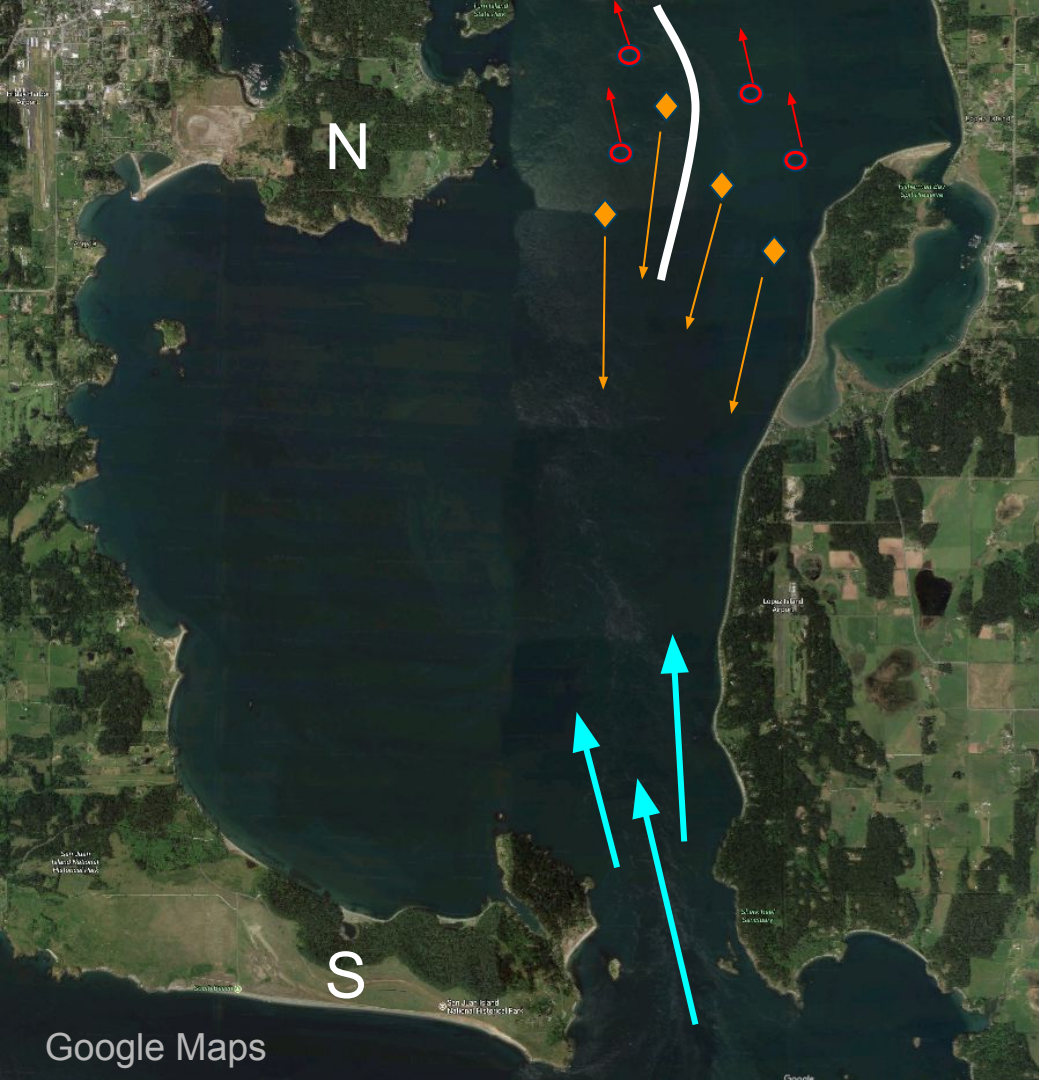


Ebb - Slack

Orange - Larids

Red - Alcids

Blue - direction of current



Approaching Fast Flood

Orange - Larids

Red - Alcids

Blue - direction of current

Key Findings

Laridae follow previous studies

Alcidae differ from previous studies

Future studies needed to confirm findings

Acknowledgments

Eric Anderson

Breck Tyler

Dave Slager

Classmates



Thank You!



Questions?