Science, Service, Stewardship

The Fishery Interaction Team: Aleutian Islands pollock and Steller sea lion research

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Status of Stocks and Multispecies Assessment
Resource Ecology and Fisheries Management
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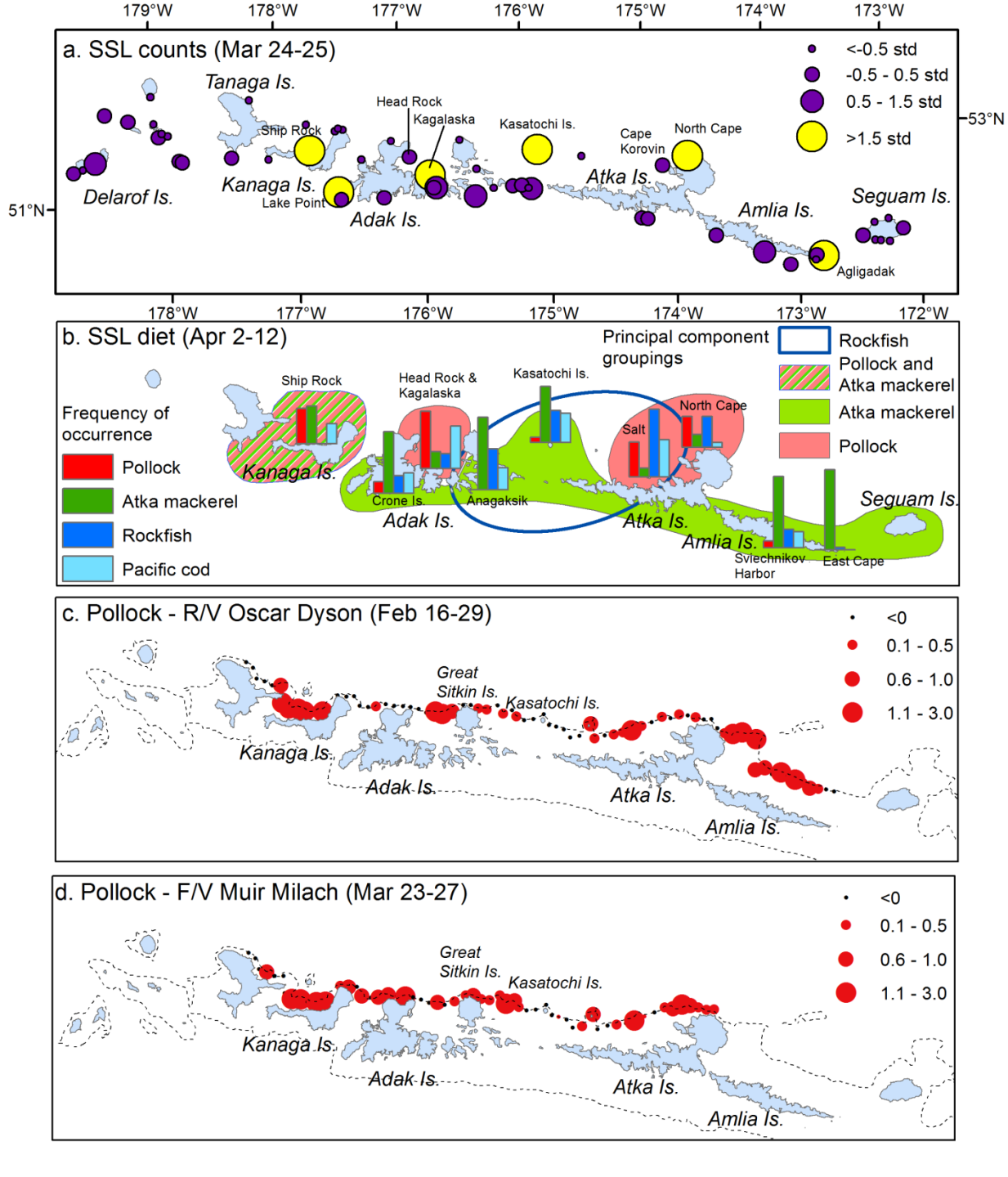
NOAA FISHERIES SERVICE

2008 Aleutian Islands Cooperative Acoustic Survey Study

- **L. Logerwell, S. Barbeaux, L. Fritz**
- **Funded by NPRB (Project #730)**
- **Goal:**
  - Whether cooperative biomass assessments and surveys could be an effective way to manage fisheries at the local scales that are important to predators such as Steller sea lions.
- **Methods:**
  - Nighttime acoustic survey 173°-178° W Longitude on board the R/V Oscar Dyson, Feb. 16 – 29, 2008
  - Aerial survey of Steller sea lion rookery and haulouts from 173°-179° W longitude, Mar. 23 - 29
  - SSL scat sampling of haulouts and rookeries from 173°-179° W longitude, Mar. 30 – Apr. 9
  - Nighttime cooperative acoustic survey 174°-178° W Longitude using F/V Muir Milach, Mar. 23-27 , same transects as R/V Oscar Dyson survey

F/V Muir Milach

- 32 meter stern trawler
- ES 60 echosounder with a 38kHz transducer


a. SSL counts (Mar 24-25)
179°W
178°W
177°W
176°W
175°W
174°W
173°W
53°N
51°N
<-0.5 std
-0.5 - 0.5 std
0.5 - 1.5 std
>1.5 std
Tanaga Is.
Ship Rock
Head Rock
Kagalaska
Kasatochi Is.
Cape Korovin
North Cape
Delarof Is.
Kanaga Is.
Lake Point
Adak Is.
Atka Is.
Amlia Is.
Seguam Is.
Agligadak
b. SSL diet (Apr 2-12)
178°W
177°W
176°W
175°W
174°W
173°W
172°W
Principal component groupings
Rockfish
Pollock and Atka mackerel
Atka mackerel
Pollock
Frequency of occurrence
Pollock
Atka mackerel
Rockfish
Pacific cod
Ship Rock
Head Rock & Kagalaska
Kasatochi Is.
North Cape
Salt
Kanaga Is.
Crone Is.
Anagaksik
Adak Is.
Atka Is.
Amlia Is.
Seguam Is.
Sviechnikov Harbor
East Cape
c. Pollock - R/V Oscar Dyson (Feb 16-29)
<0
0.1 - 0.5
0.6 - 1.0
1.1 - 3.0
Great Sitkin Is.
Kasatochi Is.
Kanaga Is.
Adak Is.
Atka Is.
Amlia Is.
d. Pollock - F/V Muir Milach (Mar 23-27)
<0
0.1 - 0.5
0.6 - 1.0
1.1 - 3.0
Great Sitkin Is.
Kasatochi Is.
Kanaga Is.
Adak Is.
Atka Is.
Amlia Is.

Conclusions

- Results from the *F/V Muir Milach*, although more variable, closely match the *R/V Oscar Dyson* survey.
- Pollock abundance in the Central Aleutian Islands remains low.
- The diets of Steller sea lions on haul-outs near areas where high densities of pollock were observed showed high frequency of occurrence of pollock.
- Local pollock aggregations are important for sea lions in the central Aleutians during winter.
- Paper (Logerwell et al.) approved to be submitted to Marine Ecology Progress Series

Contact information

http://www.afsc.noaa.gov/refm/stocks/fit/FIT.htm

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