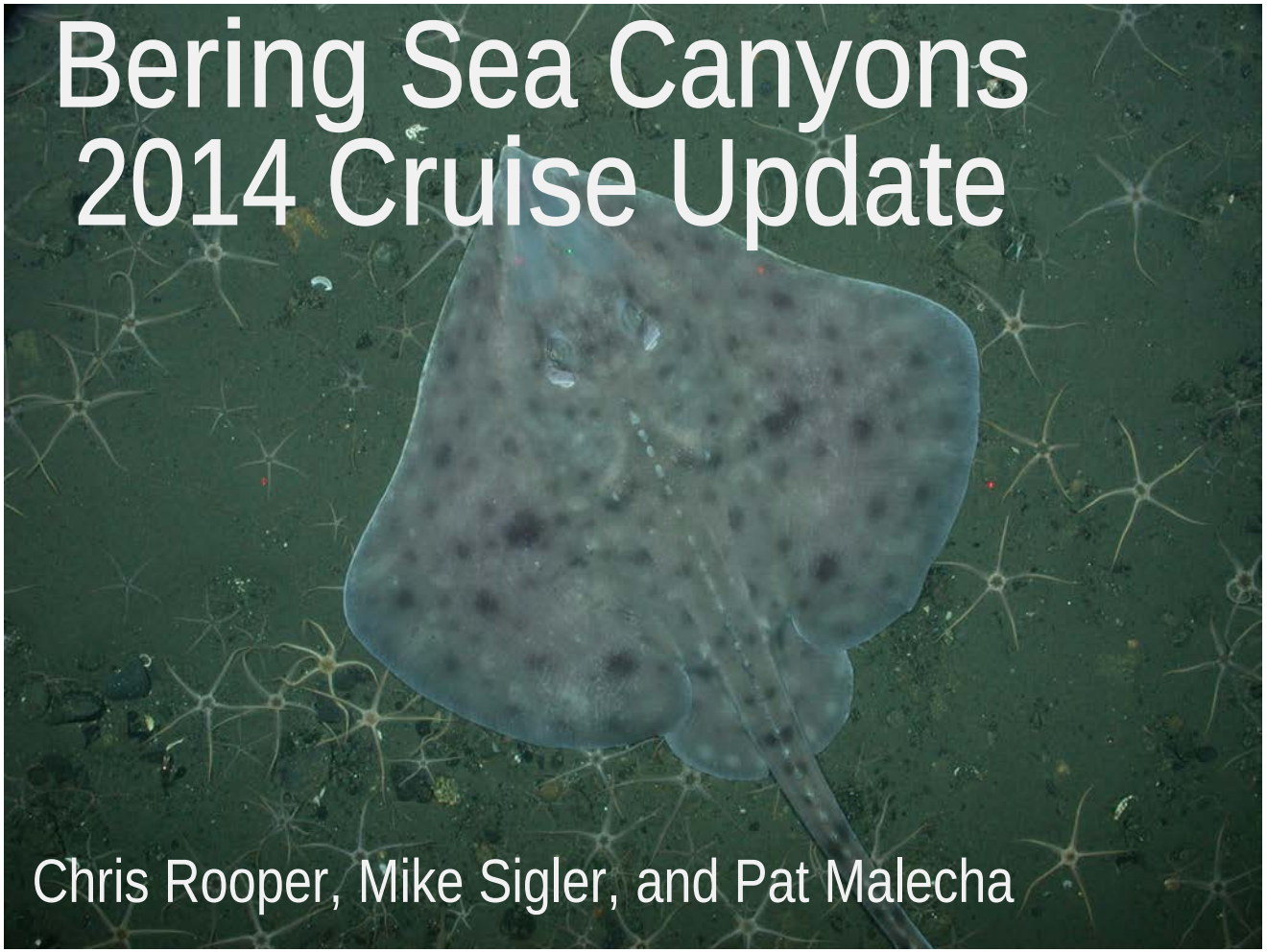
Bering Sea Canyons 2014 Cruise Update



Chris Rooper, Mike Sigler, and Pat Malecha

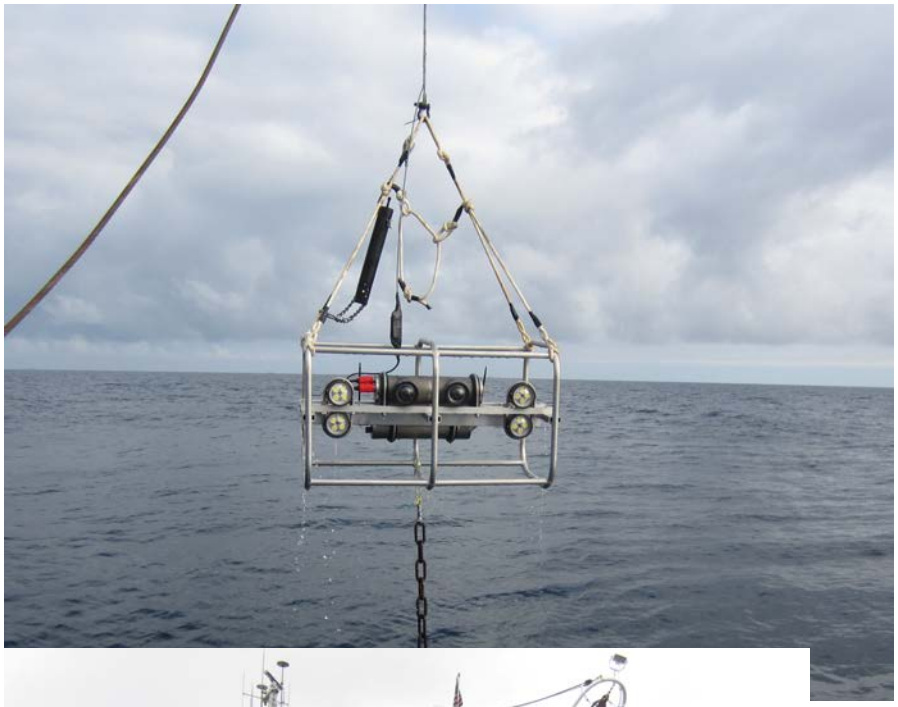
Alaska Fisheries Science Center

NPFMC Meeting
Anchorage, Alaska, October 8, 2014

Background and Timeline

- April 2012
  - — NPFMC requested analysis of existing data on the eastern Bering Sea slope and canyons
- June 2013
  - — AFSC presented results of the analysis
  - — Included predictive coral model
- June 2013
  - — NPFMC requests further analysis
  - — NPFMC requests “groundtruthing” of coral model
- October 2013
  - — Further analysis presented
  - — Plans for summer fieldwork presented
- February 2014
  - — EBS Canyons workshop

2014 fieldwork



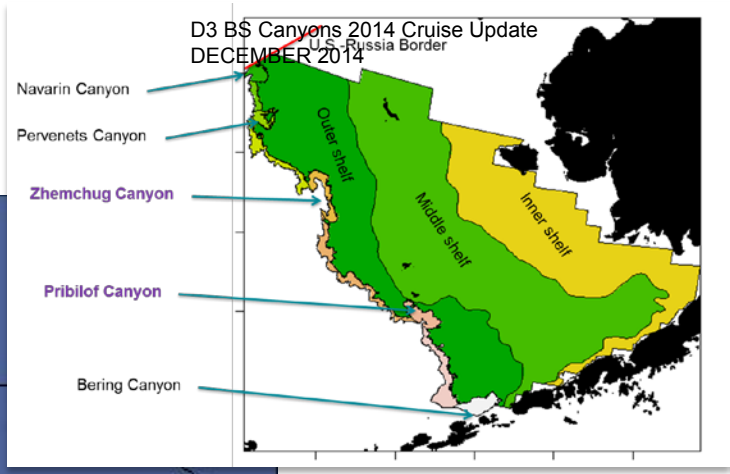
Stereo drop camera

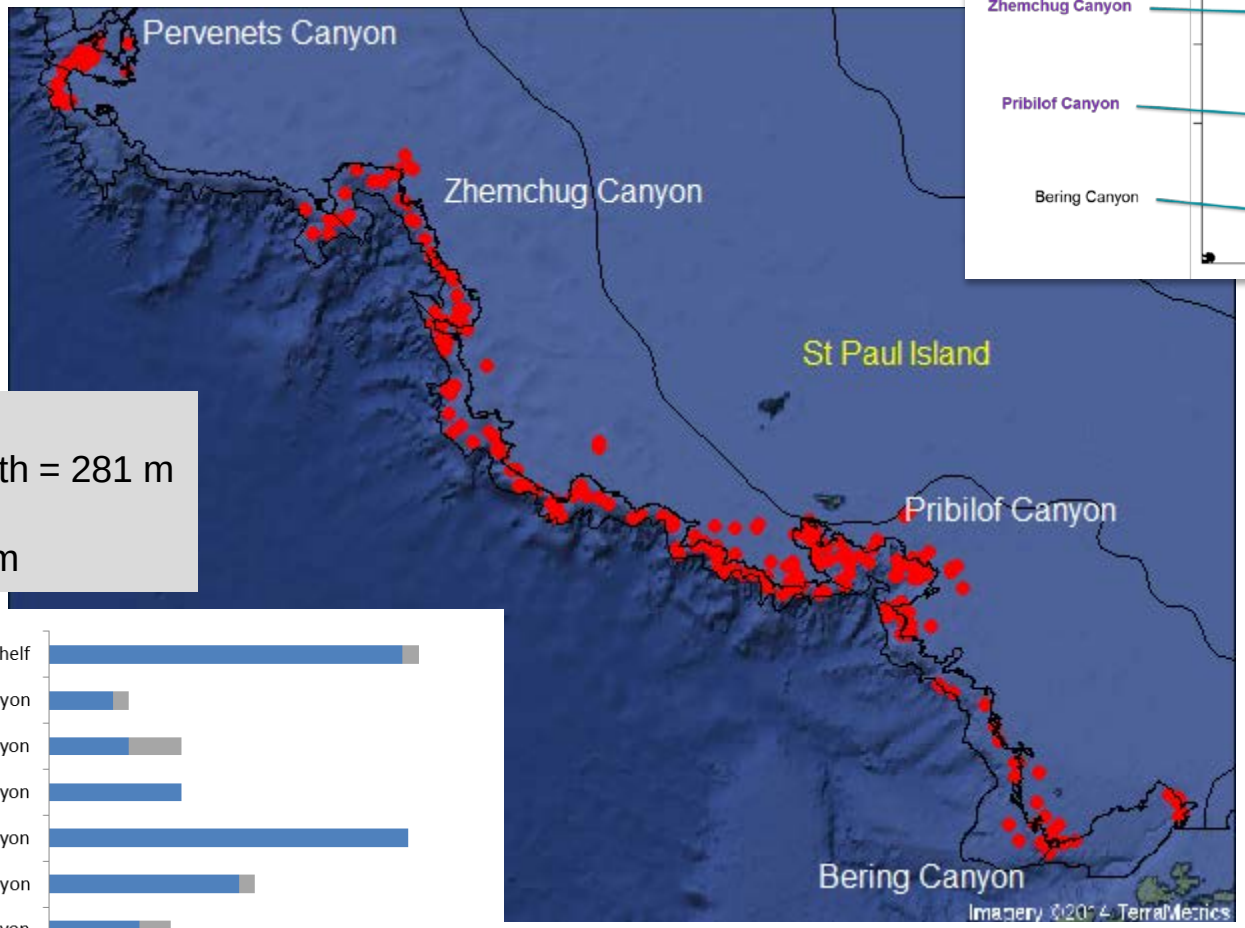
15 minute tows

250 Randomly selected stations

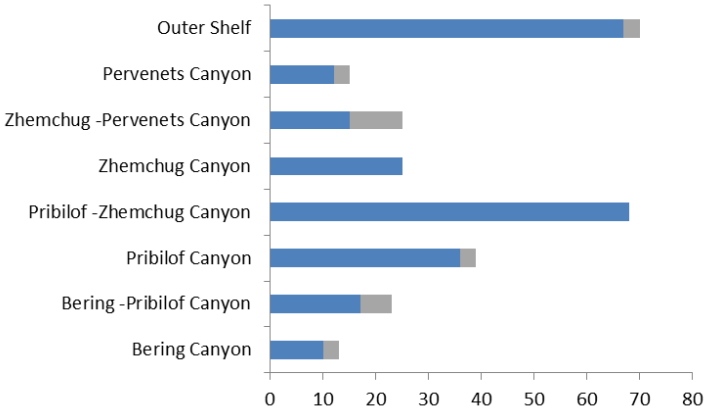
~225,000 paired seafloor images

2014 Sites



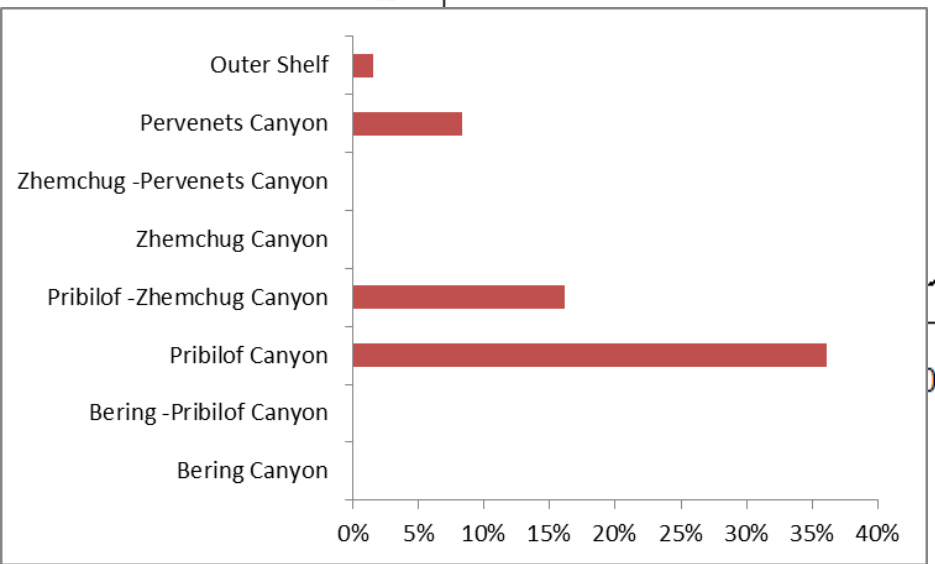


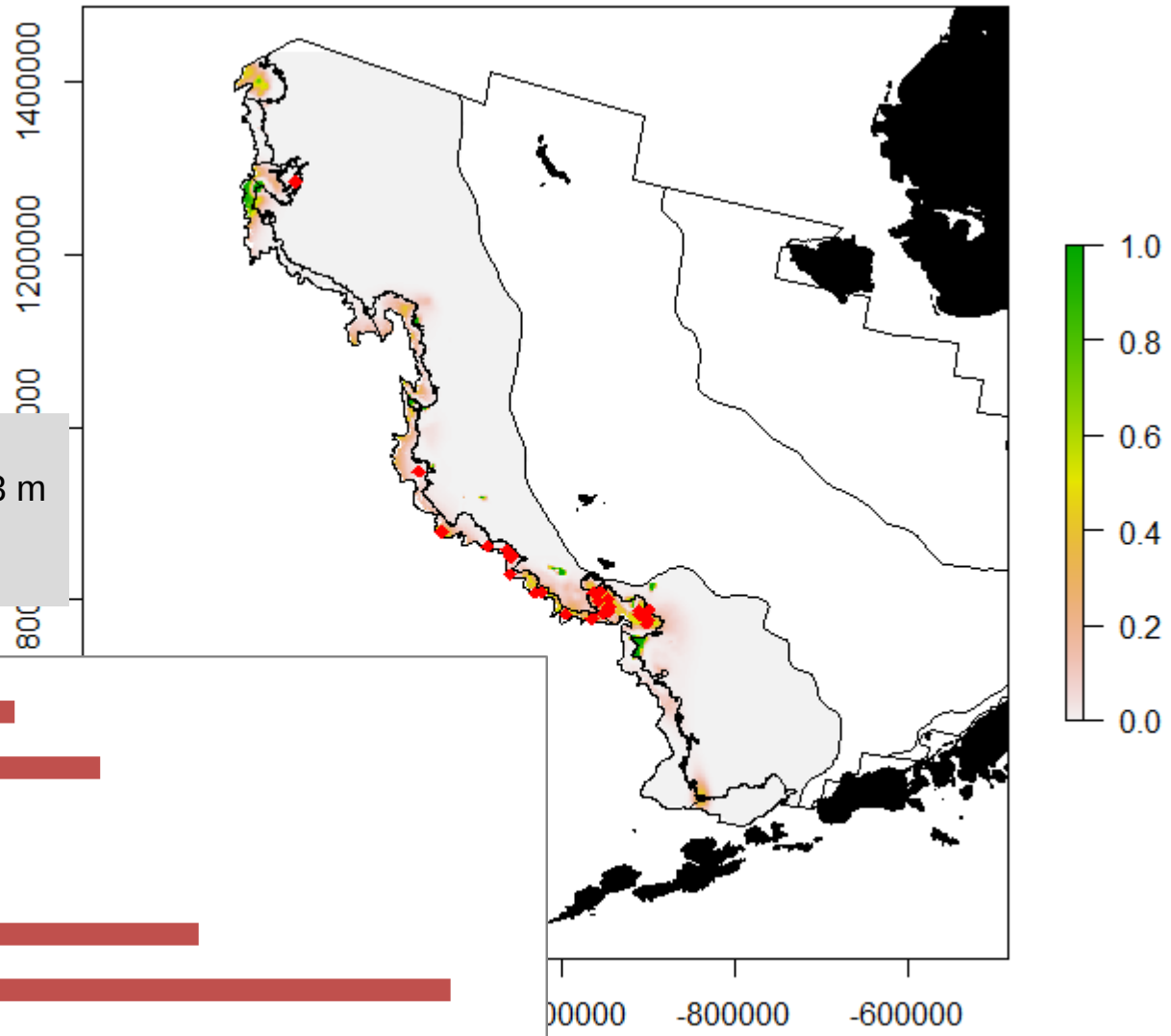
n = 250
Median depth = 281 m
Min = 91 m
Max = 808 m



Coral Preliminary Results

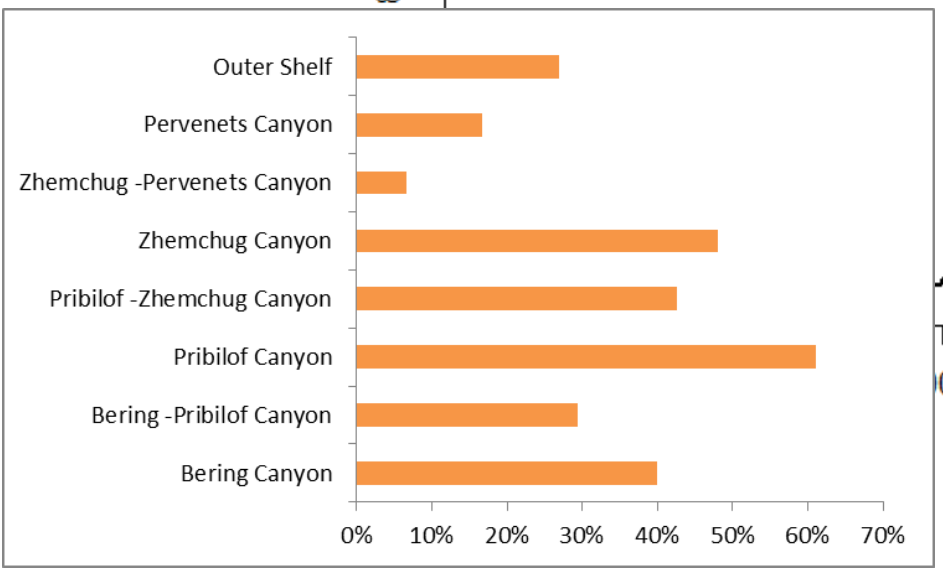
n = 26 (10%)
Median depth = 423 m
Min = 204 m
Max = 783 m

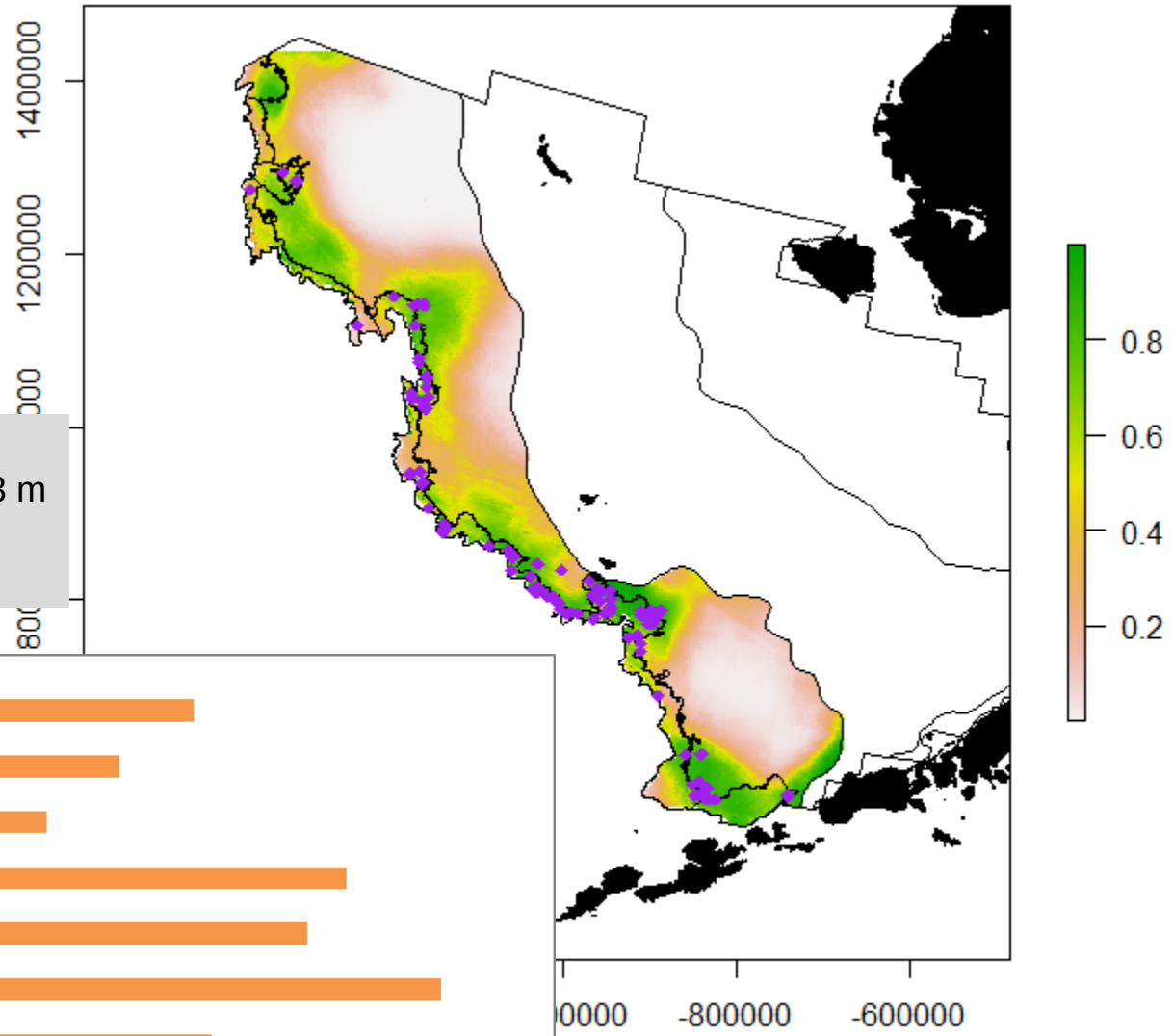




Sponge Preliminary Results

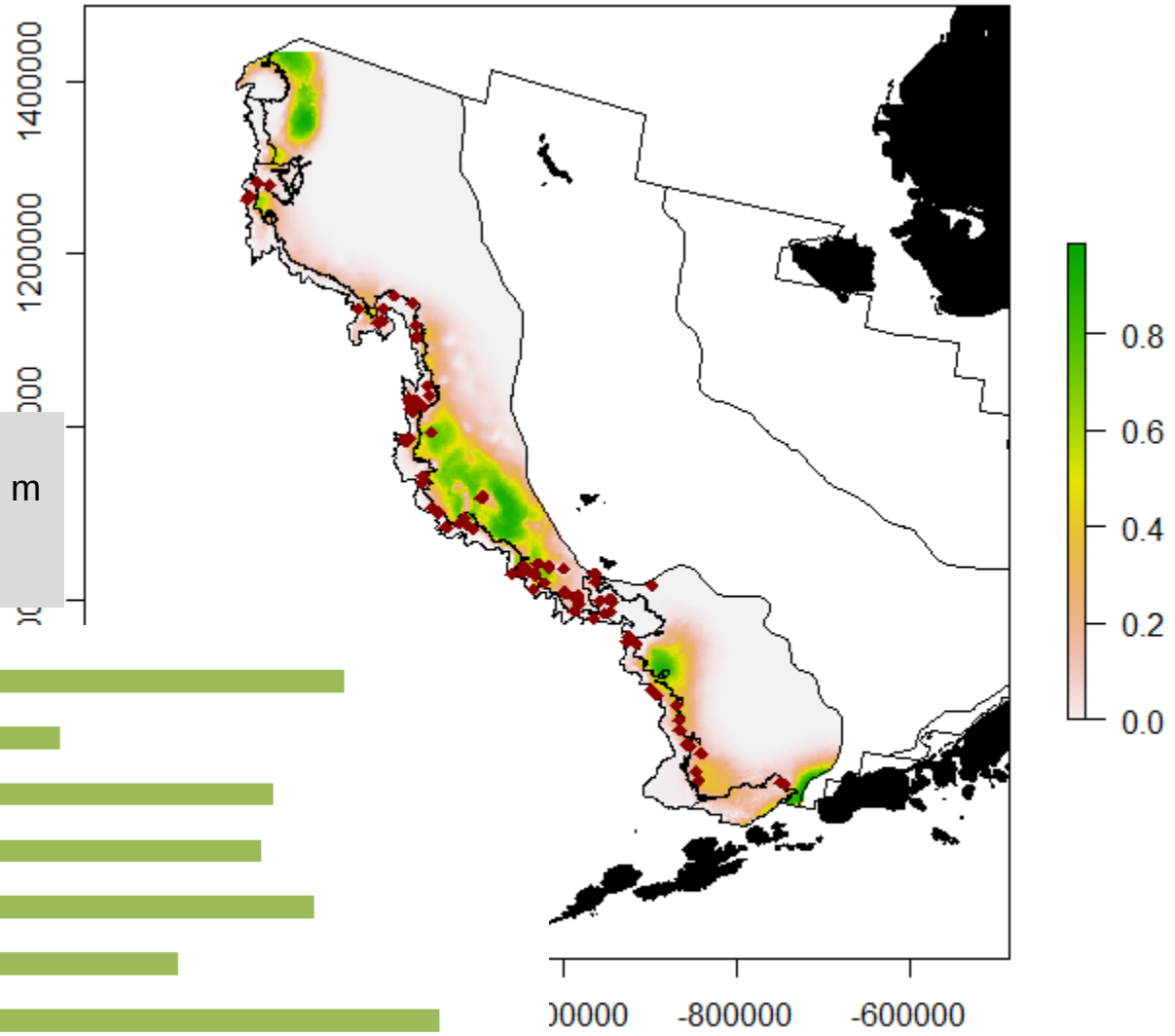
n = 93 (37%)
Median depth = 293 m
Min = 106 m
Max = 787 m



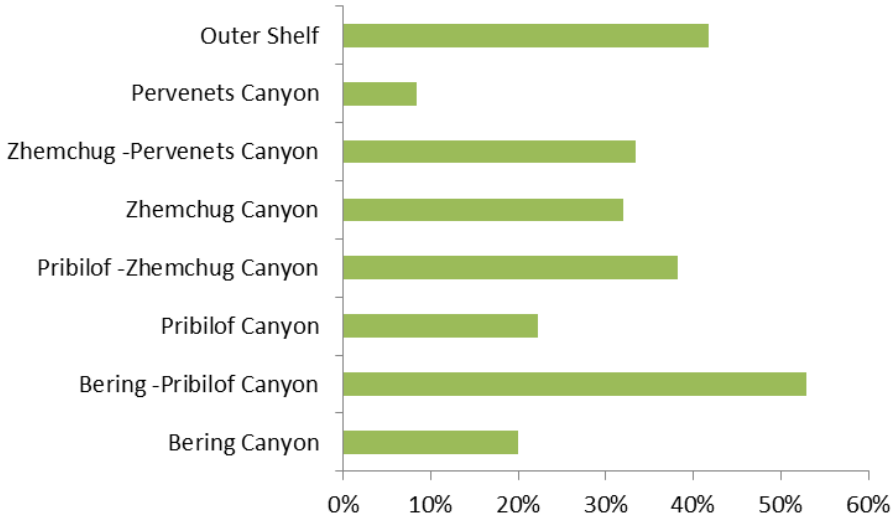


D3 BS Canyons 2014 Cruise Update
DECEMBER 2014

Sea Whips Preliminary Results



n = 87 (35%)
Median depth = 273 m
Min = 91 m
Max = 781 m



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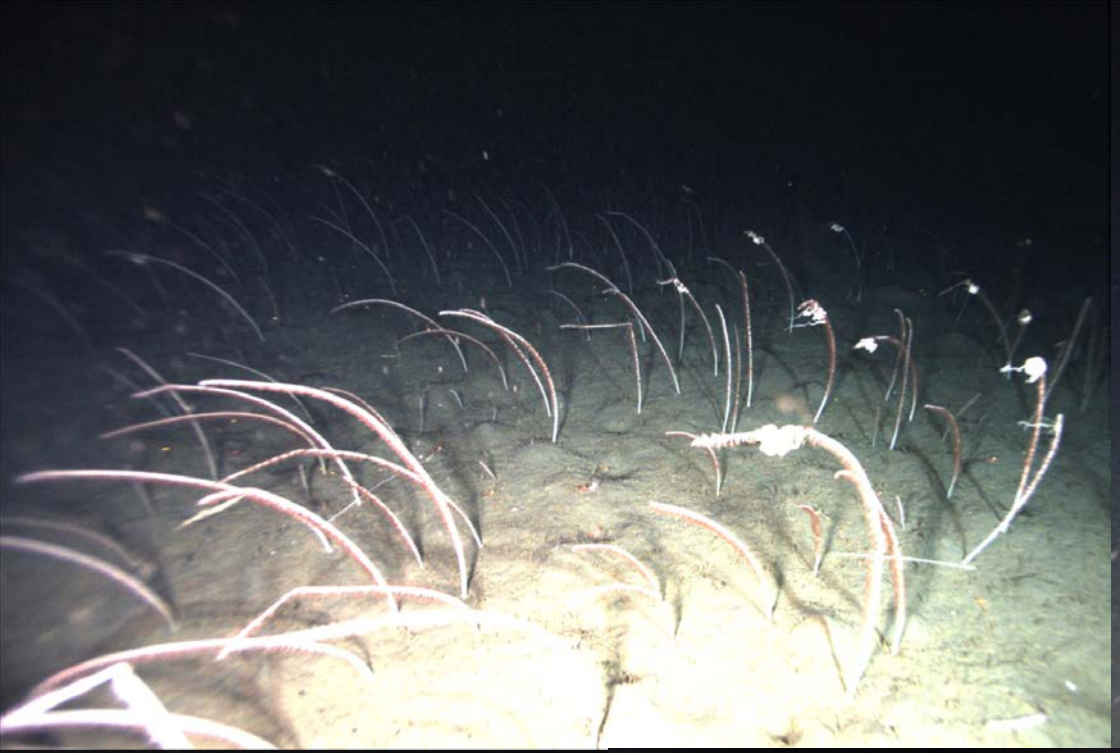
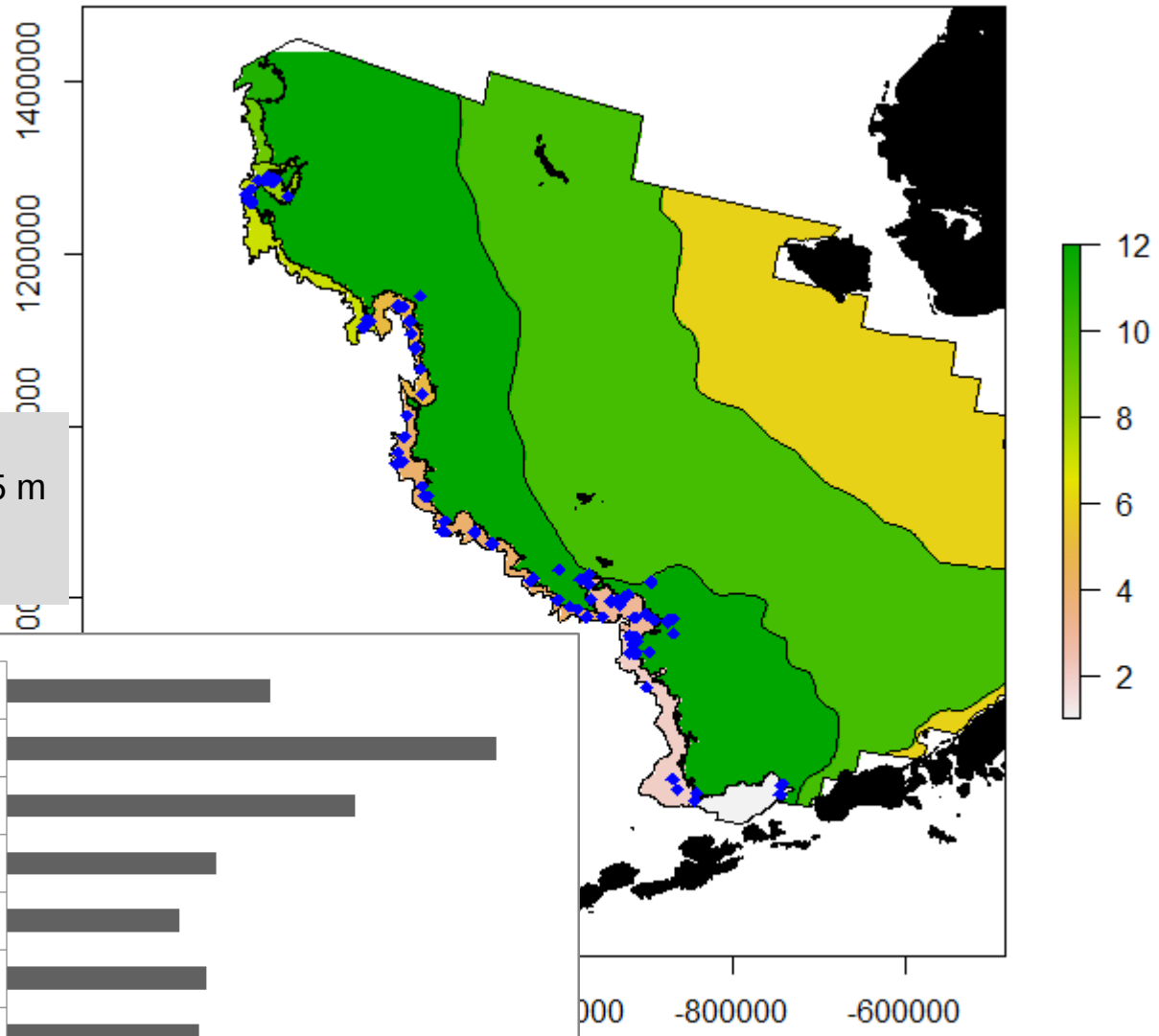
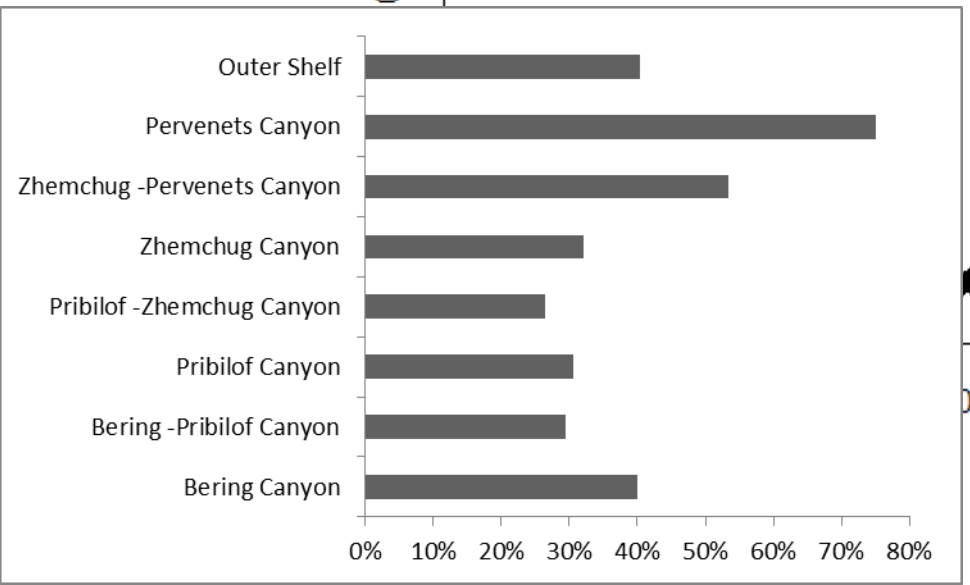


No Coral, Sponge, Sea Whip
Preliminary Results



n = 87 (36%)
Median depth = 305 m
Min = 94 m
Max = 808 m




D3 BS Canyons 2014 Cruise Update
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Preliminary Conclusions

- Coral occurrence was low throughout
  - Concentrated around Pribilof Canyon and to the northwest
  - Consistent with model results and other data (trawl, observer)
  - Densities were low even where they occurred
- Sponge & Sea Whips distributed more broadly
  - Consistent with model results and other data
  - Sponge densities were generally low
  - Sea whip densities were high in some locations (mostly shallower than 200 m)
- Other invertebrates = Anemones, Sea Cucumbers
- Dominant fishes = POP, Grenadier, Pollock, ATF, Flatfish, Sculpins

Next Steps

- Image Analysis Plan
  - View all individual frames
  - Identify, count and measure all fish species
  - Identify, count and measure all coral, sponge and seawhips
  - Identify and count other invertebrate species
- Calculate density of invertebrates
- Compare model predictions to observations (presence and density)
- Revisit modeling if necessary

Completion by June 2015

Acknowledgements

- Rick Towler
- Kresimir Williams
- Rachel Wilborn
- Pamela Goddard
- Bob Stone
- Jerry Hoff
- Mark Zimmermann
- Megan Prescott

- Funding $487K
  - AFSC – HEPR Program
  - AFSC – Cooperative Research
  - NMFS – Cooperative Research
  - DSCTRP