

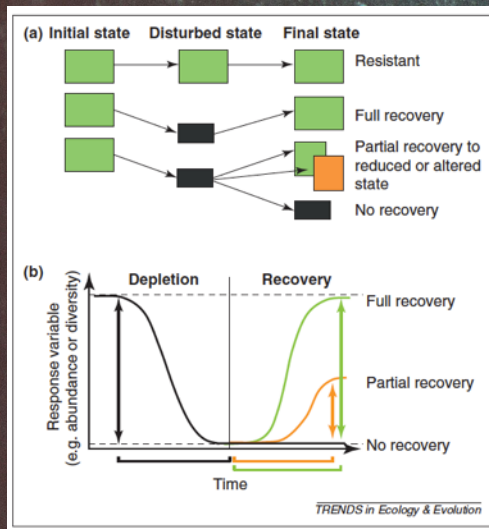
Collaborative Research: Recovery Of Seamount Precious Coral Beds From Heavy Trawling Disturbance

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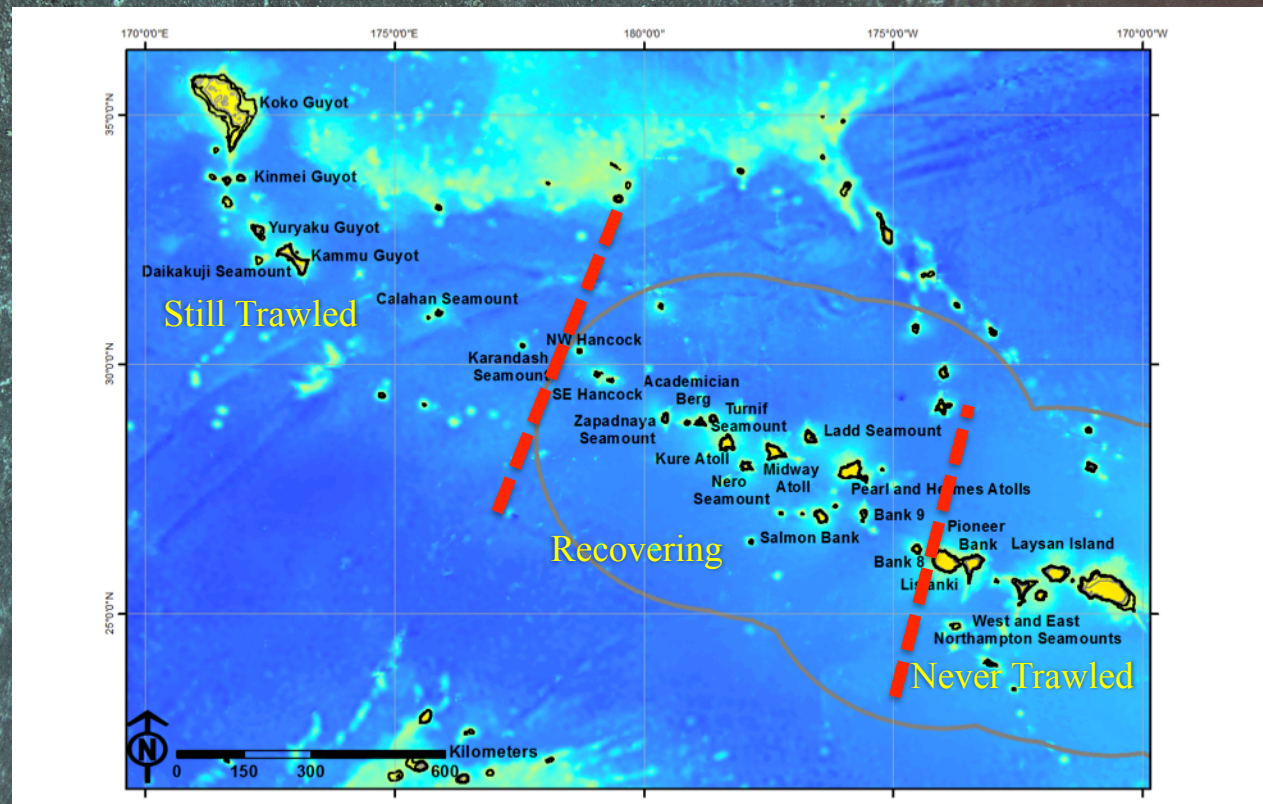


Hypothesis

- Seamounts megafaunal communities take decades to recover, if they can recover at all, from trawling



A conceptual diagram of resilience and recovery from Lotze et al. (2011).



3 sites in each treatment type

AUV Sentry 2014 and 2015 Expeditions



AUV Sentry photo survey along depth contours between 200-700m (50m intervals)

Maiden scientific voyage of the R.V. Sikuliaq (Nov 17 –Dec 12 2014)

R.V. Kilo Moana (Sept 24 – Nov 7 2015)

Sampling cruise (47 days) with ROV Jason in 2016

Sampling Cruise Objectives

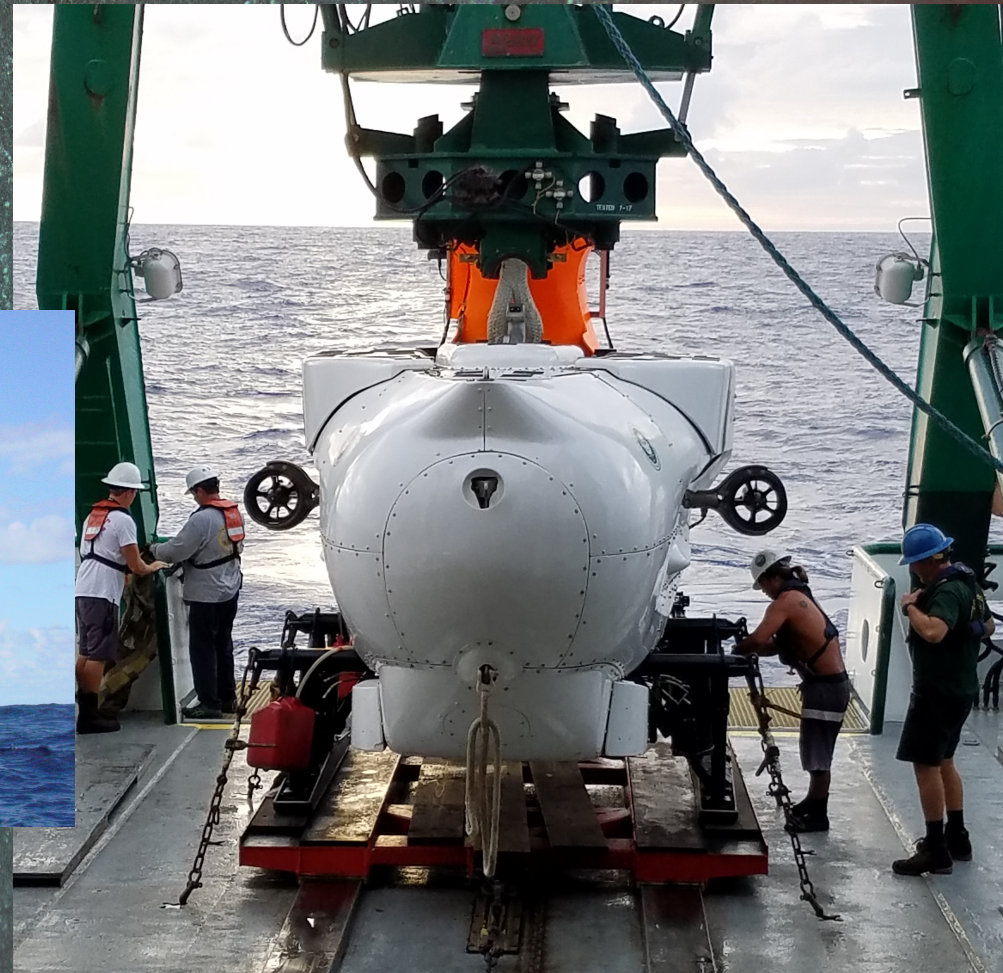
- Video transects along depth contours – augment AUV transects and new data
- Voucher specimens of dominant fauna (no urchins)
- Collecting population genetic samples of Coralliidae
- Collecting aging samples of Coralliidae
- Size-Frequency data
- Opportunistic additions – lander recovery

RV Kilo Mauna mechanical issues cancelled ROV Jason cruise.

Hawaii Undersea Research Laboratory

Pisces IV/V

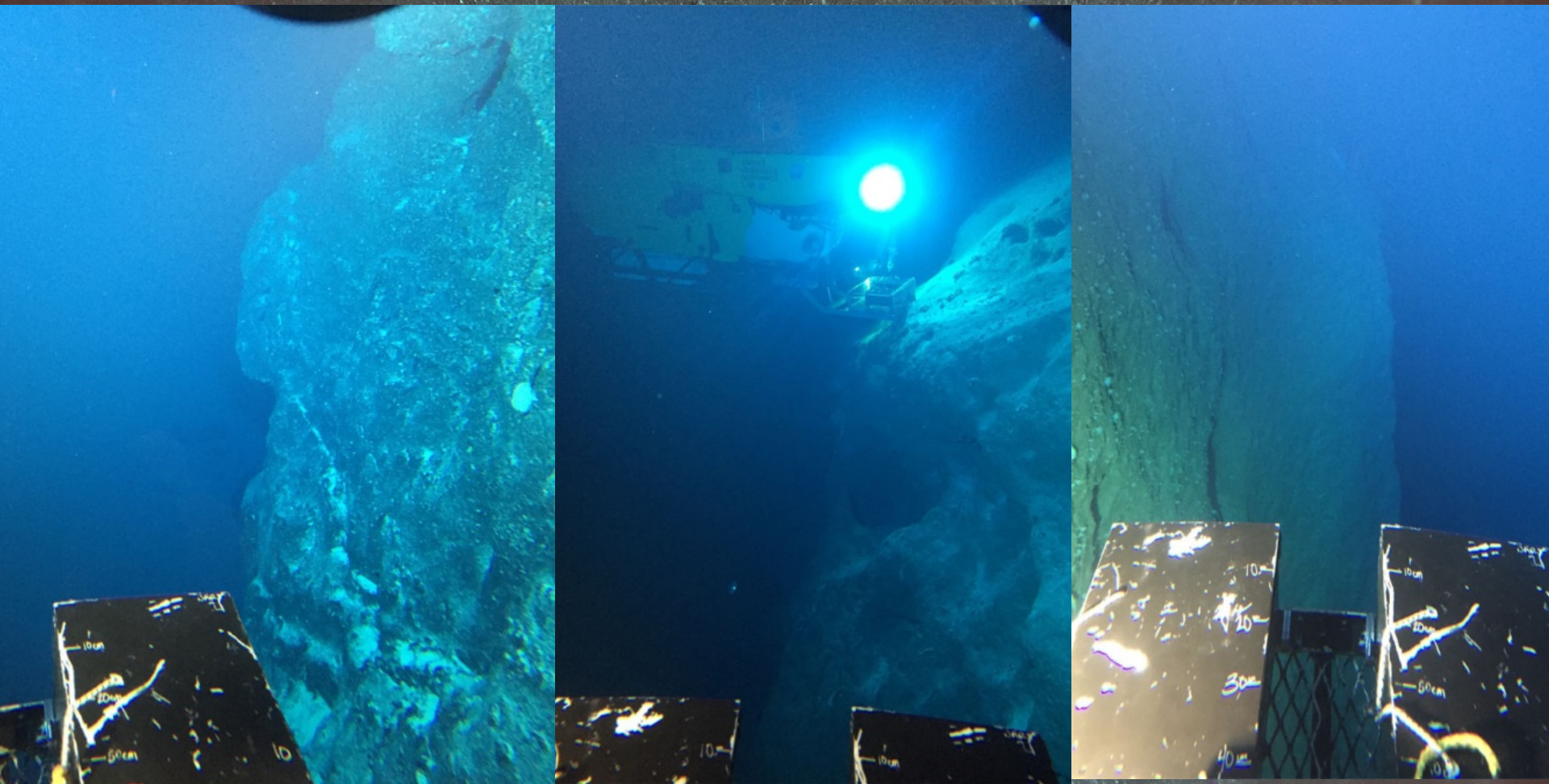
- Conducted as 2 dives days per site with both subs diving each day
- 2016/2017



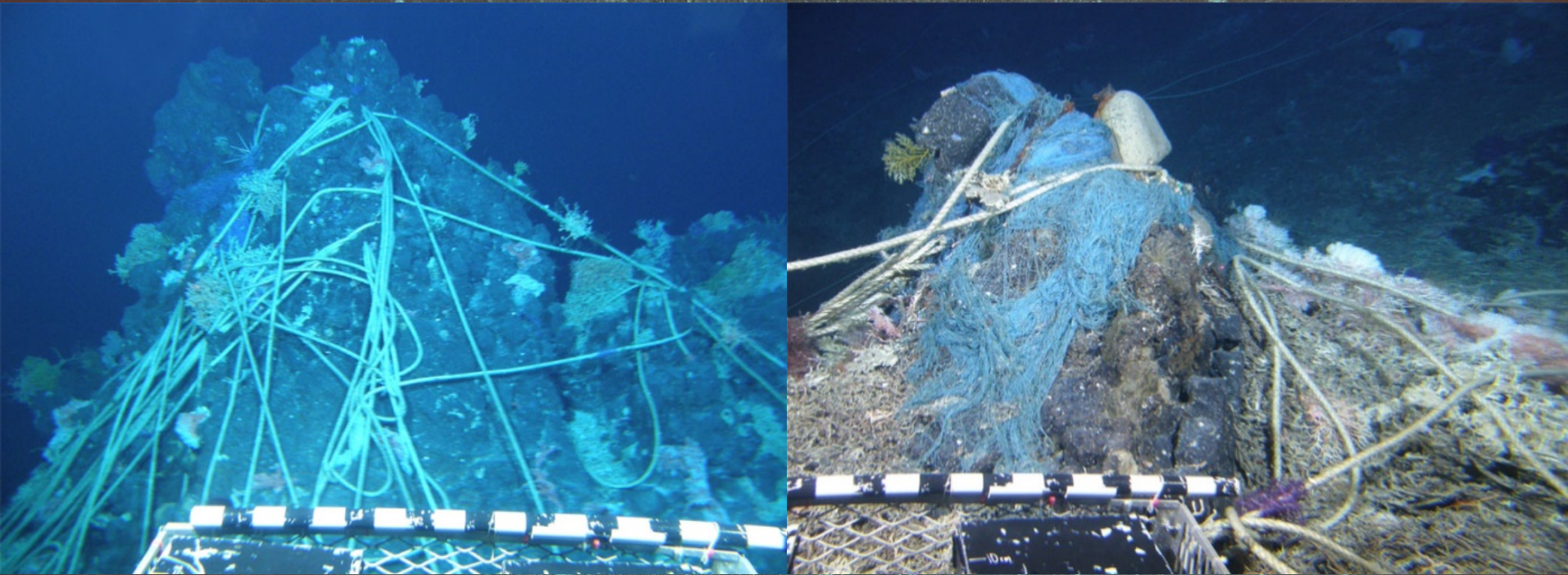
2017 Cruise Summary

- 51 submersible dives (79 total for project) at 10 seamounts with 1-2 sites per seamount.
- 205 500m transects, many dives >10km in length.
- 258 aging specimens and 500 genetic samples of target species, plus 300 other coral as vouchers (total for project >400 aging, >1100 genetic)
- Weather (as expected) and ship mechanical issues cause the loss of a few dive days.

Vertical and Rough Terrain



Fishing Gear



Hypothesis-Driven Exploration

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Defying Dissolution: Discovery of Deep-Sea Scleractinian Coral Reefs in the North Pacific

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Deep-sea scleractinian coral reefs are protected ecologically and biologically significant areas that support global fisheries. The absence of observations of deep-sea scleractinian reefs in the Central and

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How can we save the
Pisces subs?

