

Rapid Assessment Protocol

- Culmination of > 10 years Shoreline Research and Outreach
- Addresses key request from end-users – “Do these work?”
- Baseline for Change Assessment

Ecological and Structural Performance

- Ecological – Several variables known to be linked to ecological functions in the Hudson River.
- Physical –
 - Stability of “built” structures
 - Assess the physical forces on the site

Purpose

- Track change over time – yearly observations, after event.
- Today
 - Introduce / interpret variables
 - Put Demonstration sites in context

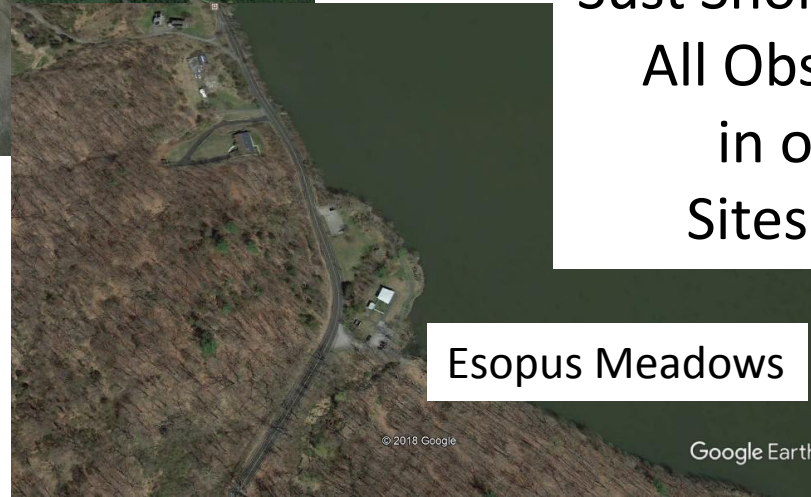
Protocol Applied at 5 Sites Summer 2017

Sust Shore Demonstration sites
All Observations Collected
in one low tide cycle
Sites are quite variable

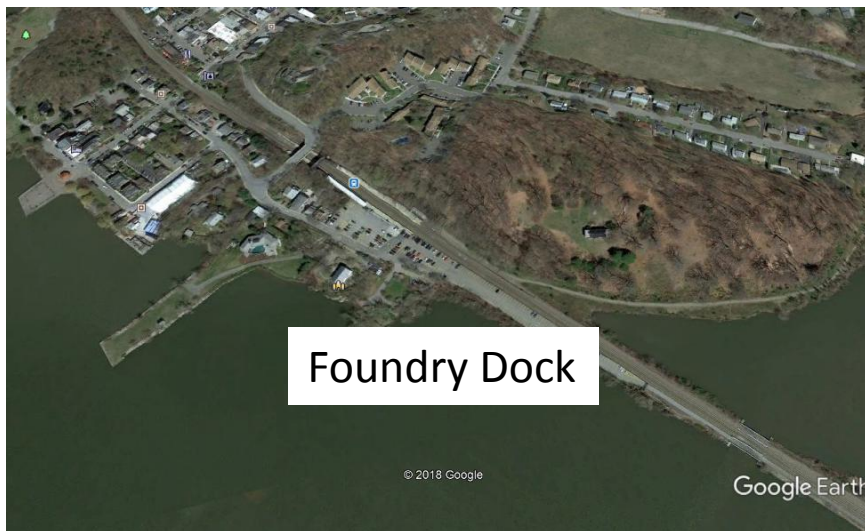


Nutten Hook

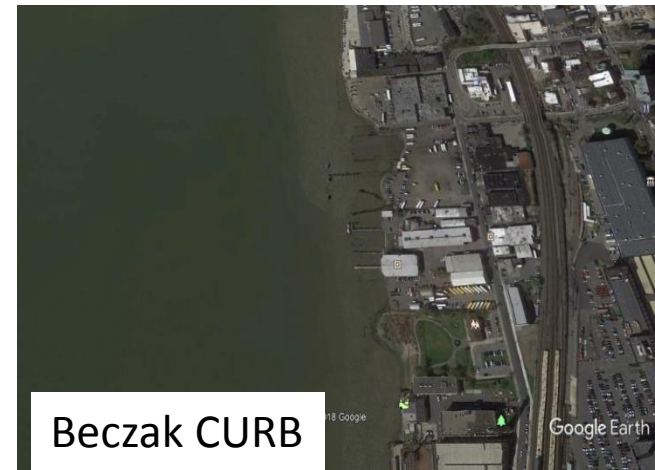
Cocksackie



Esopus Meadows



Foundry Dock



Beczak CURB

Stability

- Asset Displacement –



- Key Elevations –



- Erosion -



Forces

- GIS layer of Modelled currents/waves, ice observations
- Wave attenuation by sill if present
- Plaster casts for erosive forces

ECOLOGICAL VARIABLES

- Wrack – Indicator, Organic Matter and Habitat



- Wood – Indicator, Habitat



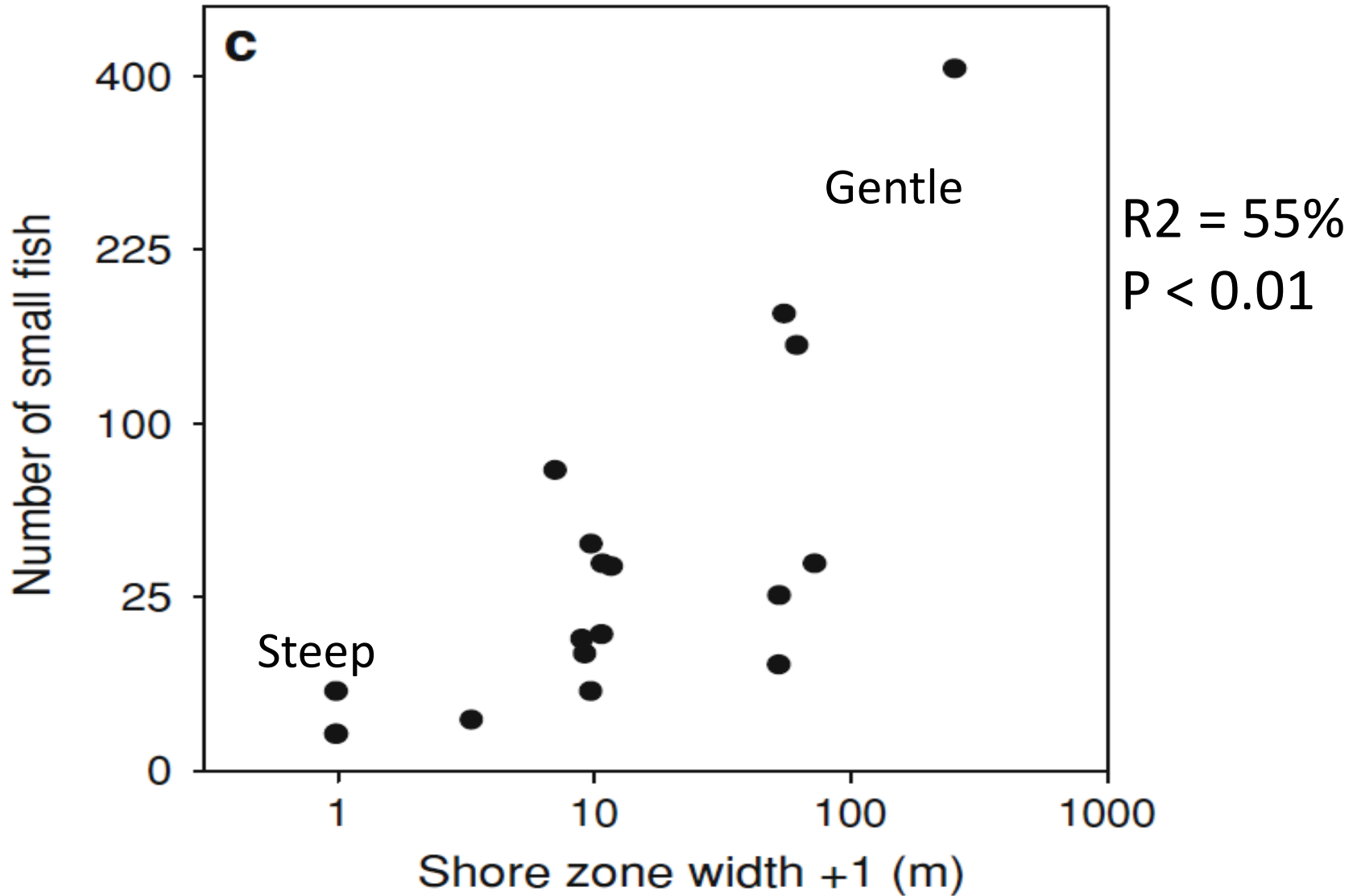
- Vegetation – Indicator, Habitat and Structural element



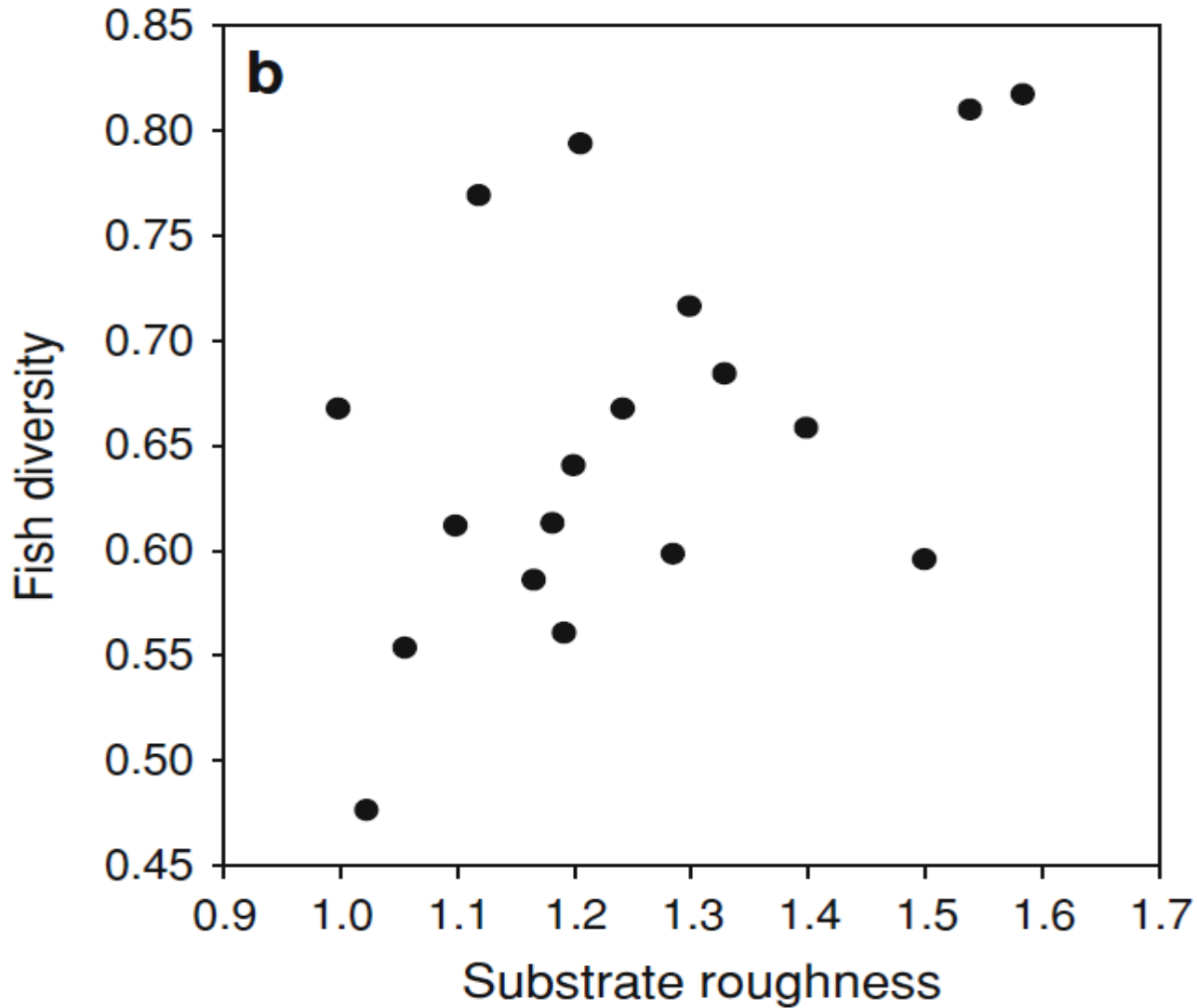
CONTEXT (Tie to Strayer Presentation)

- Earlier Hudson Shoreline Ecology Data Sets
 - Multiple shore types, built and natural
 - Identified range in ecological variables
 - Found some “predictors” of ecological function
 - Slope
 - Roughness

SLOPE



HETEROGENEITY



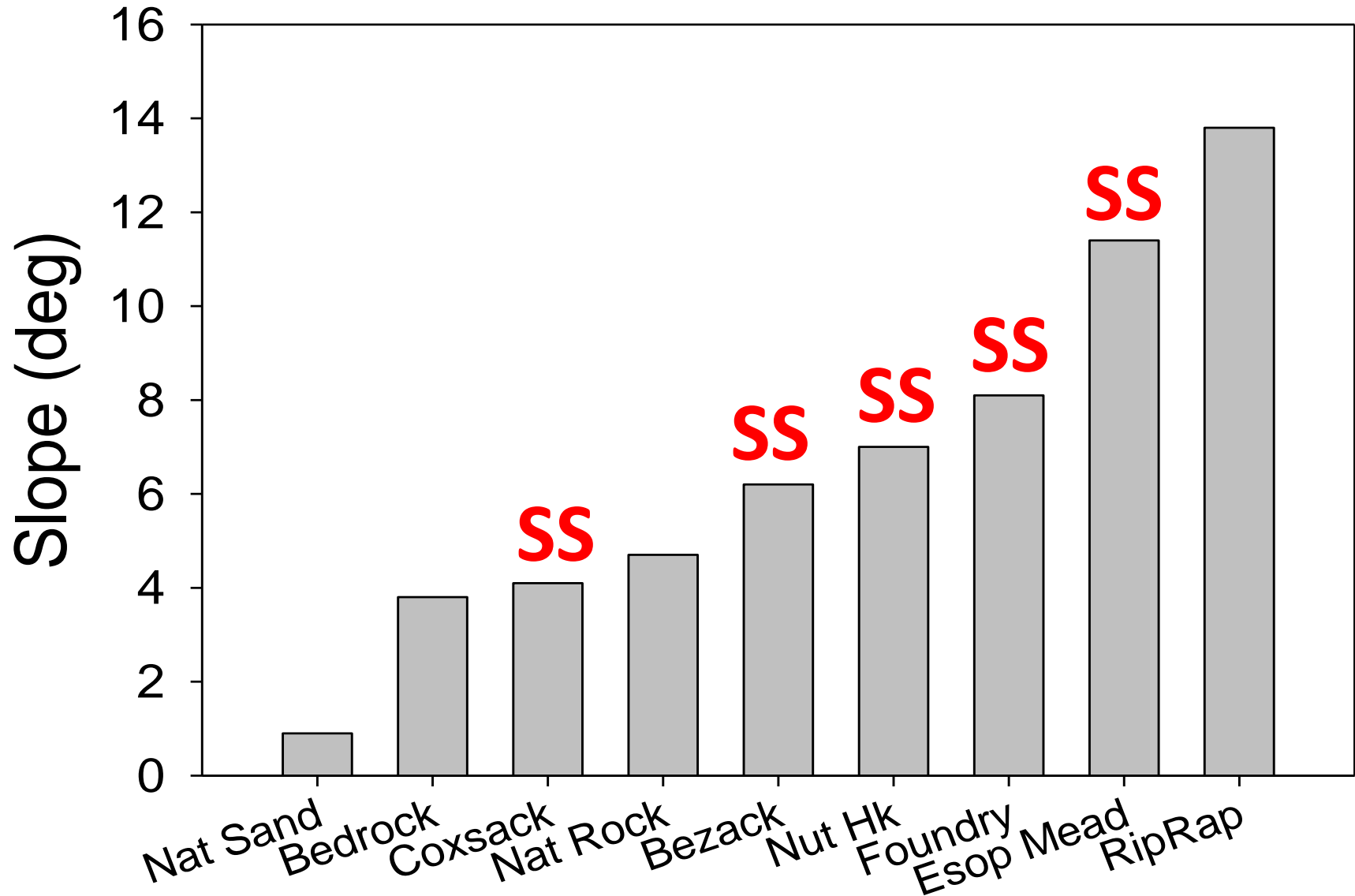
$R^2 = 25\%$

$P = 0.03$

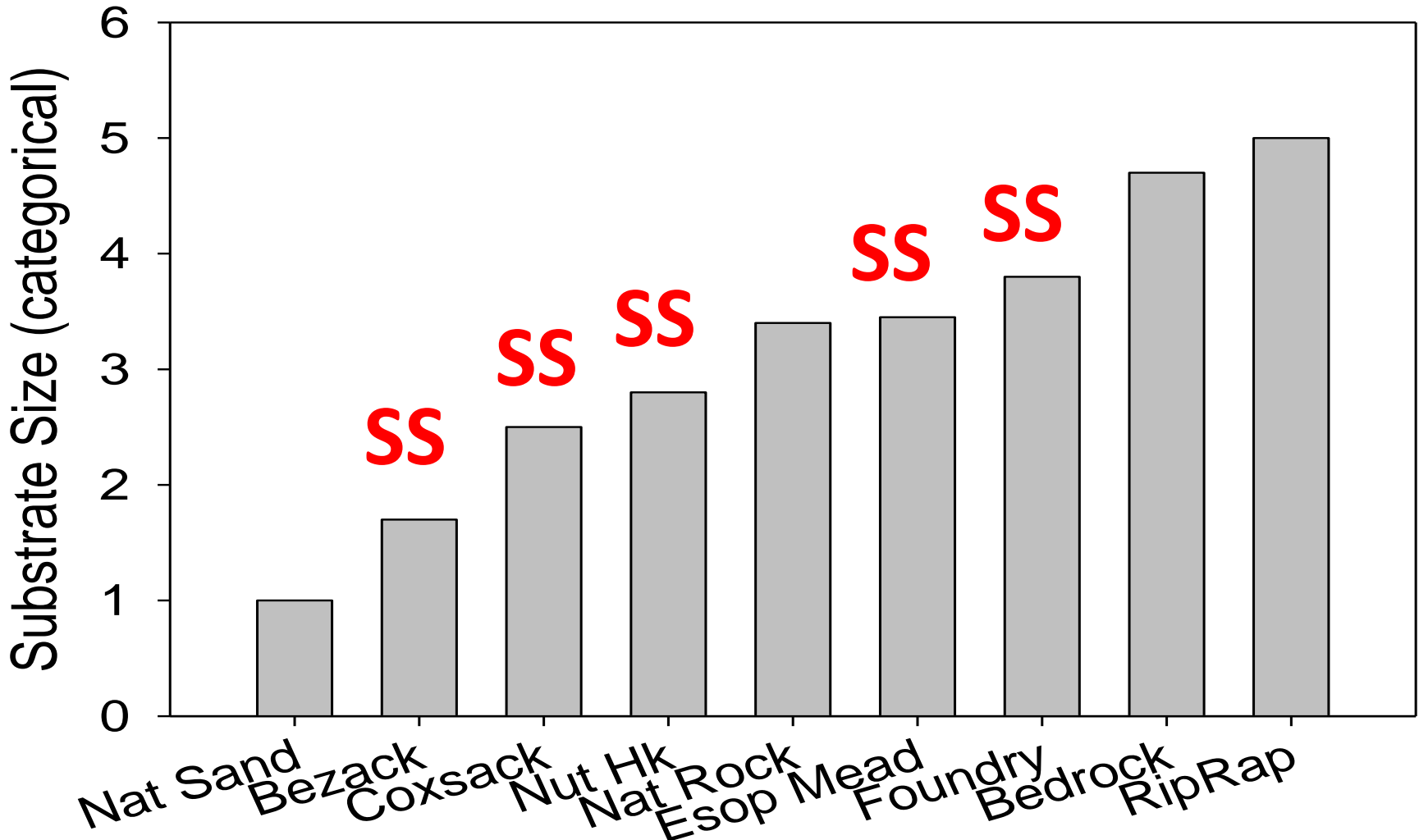
SITES

SITE	YEAR CONSTRUCTED	WRACK +/-	WOOD +/-	VEG # size classes
Beczak	2004	2 of 8	0	2 of 3 No canopy
Esopus Mead	2006	3 of 18	3 of 18	2 of 3 One canopy
Coxsackie	2012	1 of 12	3 of 12	1 of 3 1 Understory No canopy
Foundry Dock	2006	0	1 of 21	3 of 3
Nutten Hook	Pending	2 of 23	3 of 23	2 of 3 No understory

Sustainable Shore relative to other types



Sustainable Shore relative to other types



Still To Do

- Final Wrap up with Advisory Committee
- Link to other Shoreline Research/Assessment
- Long-Term Data Collection, Curation, Analysis
- Continued and New Participant Training
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