Habitat variability and distribution of the Santa Ana sucker, *Catostomus santaanae*, in the Santa Ana River from the RIX facility to the Prado Basin

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Information presented is draft, subject to revision, and not citable

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Objectives

- Document sucker distribution along the SAR from the RIX facility to Prado Basin
- Correlate sucker distribution with habitat variability

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Methods

- Surveyed 32 randomly stratified Riverwalk points between May 2013-August 2013
- ~600m apart and 2.1km between each grouping
- At each point:
  - Habitat variables collected
  - Seined upstream along each bank
  - As fauna were captured, they were placed in an aerated bucket
  - Fauna were identified to species; sucker were weighed, SL measured and released upon completion of survey
- Calculation of age class and % occupancy
- Calculation of ordinary least squares regression on each substrate and water quality variable

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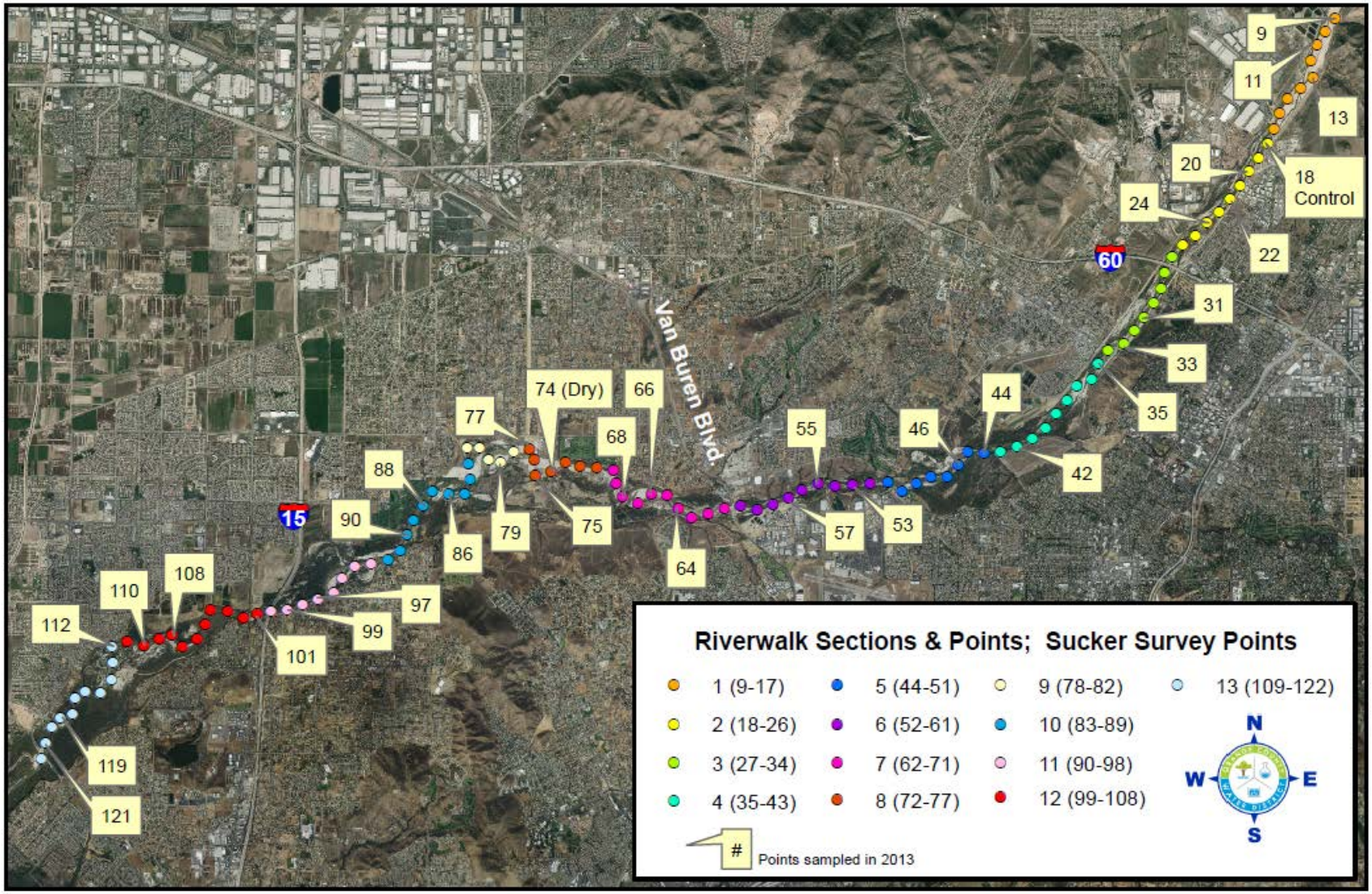
Riverwalk Points Sampled for SA Sucker in 2013



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Distribution of suckers

- A total of 301 suckers were captured and processed
- Majority of sucker captured occurred upstream from the RIX facility to just downstream of Mission
- 34.4% occupancy among 32 points surveyed
- Points 20, 22 and 24 located bewteen Riverside Ave and Market St
- 98% of suckers caught were aged 0+

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Figure 7: Invasive species distribution at sites

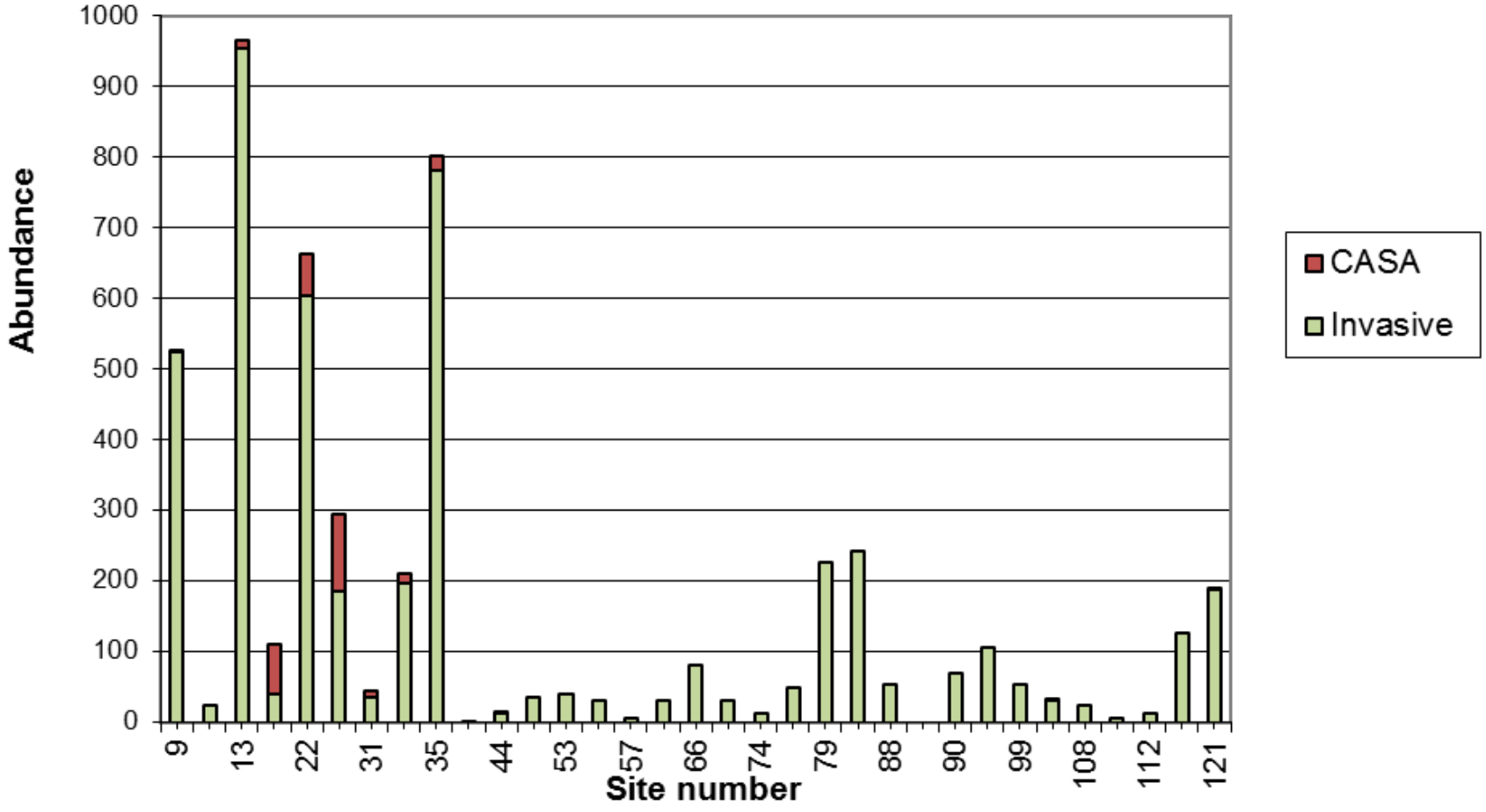

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Figure 5: Substrate composition of sites

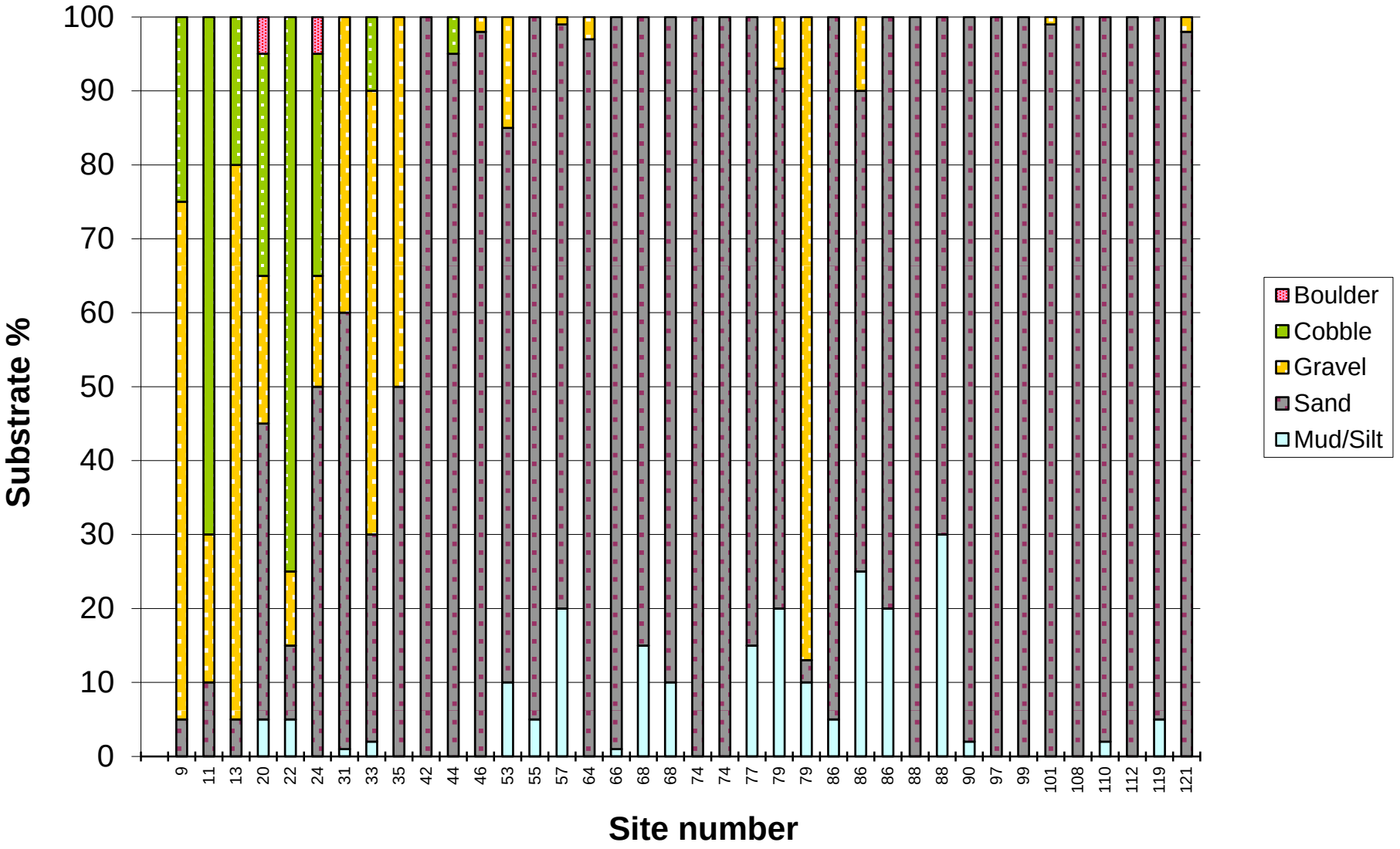

Figure 6: Substrate composition and sucker captures

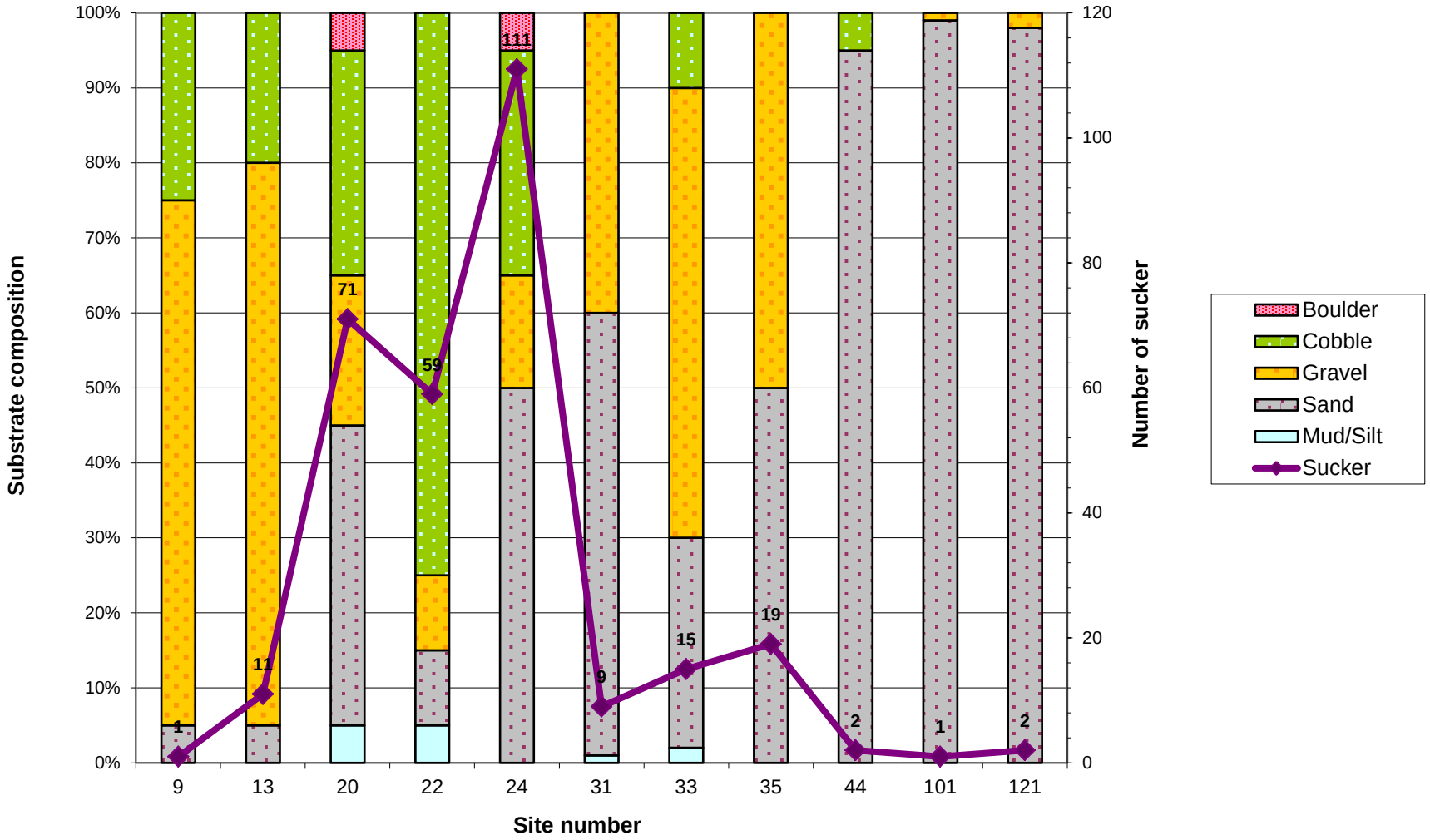

Table 3: Ordinary Least Squares Regression results when tested individually at a 95% confidence interval of variables. Shows either a positive or negative association with the presence of suckers. The standard coefficient shows the the influence of each variable on suckers present.

Variable	R	R^2	Std. Coefficient	p-Value	Association
Mud/Silt	0.139	0.019	-0.139	0.406	Not significant
Sand	0.399	0.159	-0.399	0.013	-
Gravel	0.145	0.021	0.145	0.385	Not significant
Cobble	0.513	0.264	0.513	0.001	+
Boulder	0.870	0.757	0.870	0.000	+
Water Temp.	0.373	0.139	0.373	0.021	+
DO	0.150	0.022	-0.150	0.369	Not significant
DO%	0.085	0.007	-0.085	0.612	Not significant
TDS	0.325	0.106	-0.325	0.050	-
pH	0.057	0.003	0.057	0.736	Not significant
Conductivity	0.346	0.120	-0.346	0.033	-
Salinity	0.436	0.190	-0.436	0.007	-

Conclusions

- Distribution of suckers is consistent with the findings in other surveys
- Test suggests that habitat variables are not the only determining factor to presence of suckers along the SAR
- Boulder has the strongest positive significance on the presence of sucker

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