

Rock Nitrogen

Rebecca Martinez

November 14, 2025

Contents

Rock Nitrogen PPM from Santa Cruz Island and Sedgwick Reserves	1
Summary Tables	1
Visualization 1: Nitrogen by Rock Type and Treatment	2
Visualization 2: Nitrogen by Rock Type and Location	3
Visualization 3: Nitrogen by Location, Faceted by Treatment	4
Visualization 4: Nitrogen by Treatment, Faceted by Location	5
Visualization 5: Boxplot of Nitrogen Values	7
Visualization 6	8
Visualization 7	8

Rock Nitrogen PPM from Santa Cruz Island and Sedgwick Reserves

Summary Tables

This section summarizes nitrogen concentrations for all rock samples after cleaning the dataset.

Separated by location:

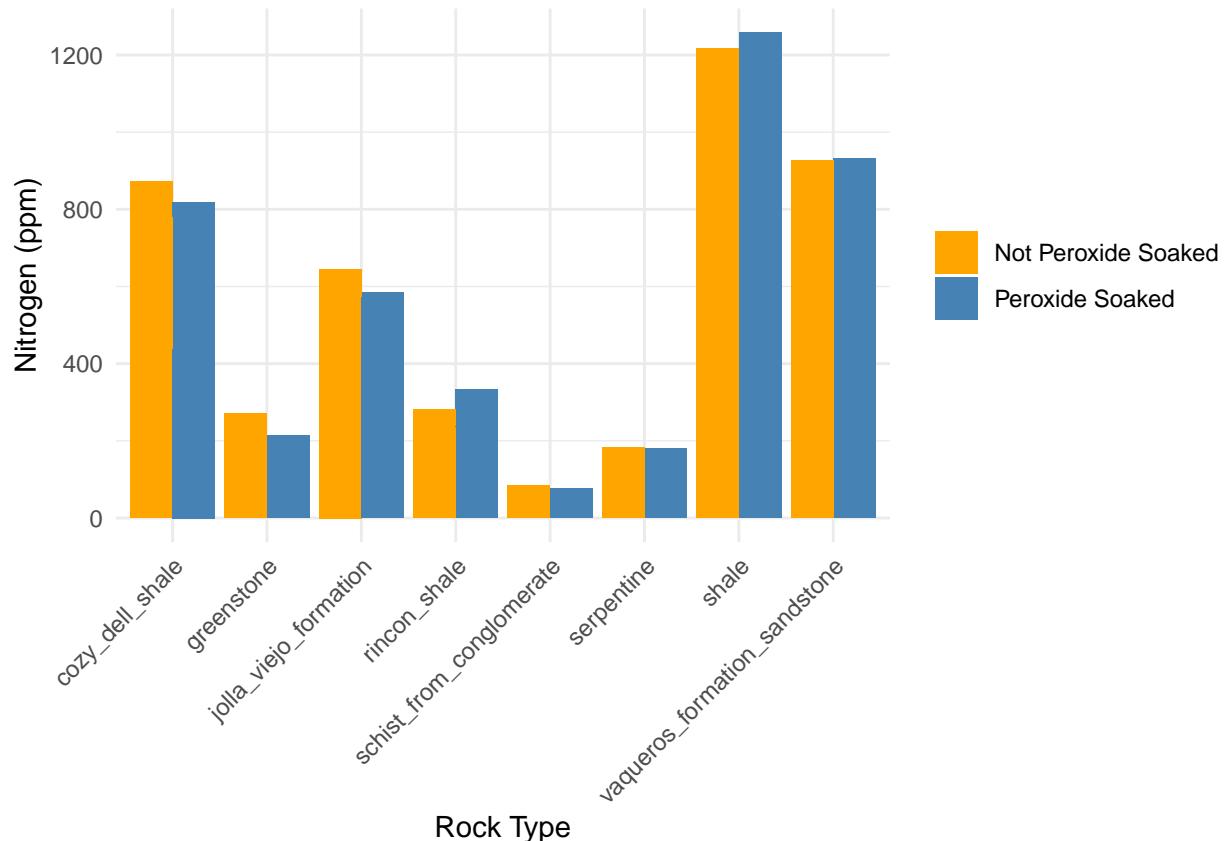
Not separated by location:

Sample Name	Location	Rock Type	Not Peroxide Soaked	Peroxide Soaked
brncp1	Sedgwick	shale	1,211.79163	1,211.79163
tvs-s	SCI	vaqueros_formation_sandstone	885.54587	885.54587
tcd-3	SCI	cozy_dell_shale	854.75775	854.75775
tcd-2	SCI	cozy_dell_shale	768.96434	768.96434
tcd-1	SCI	cozy_dell_shale	647.46857	647.46857
tjv-2	SCI	jolla_viejo_formation	611.48395	611.48395
tjv-1	SCI	jolla_viejo_formation	532.10044	532.10044

Sample Name	Location	Rock Type	Not Peroxide Soaked	Peroxide Soaked
tr-1	SCI	rincon_shale	279.37187	
tvs-c	SCI	vaqueros_formation_sandstone	310.53849	
trwcp1-5	Sedgwick	greenstone	269.77375	
tr-2n	SCI	rincon_shale	232.17176	
trwcp1-3	Sedgwick	serpentine	182.56694	
trwcp1-2	Sedgwick	serpentine	113.72838	
trwcp1-4	Sedgwick	greenstone	107.65071	
trwcp1-1	Sedgwick	serpentine	87.58133	
sci-blue-schist	SCI	schist_from_conglomerate	83.79475	
trncp1	Sedgwick	greenstone	51.67637	

Visualization 1: Nitrogen by Rock Type and Treatment

This first figure compares nitrogen concentrations across rock types and shows whether each sample was peroxide-soaked. It helps identify any treatment effects within each rock type..

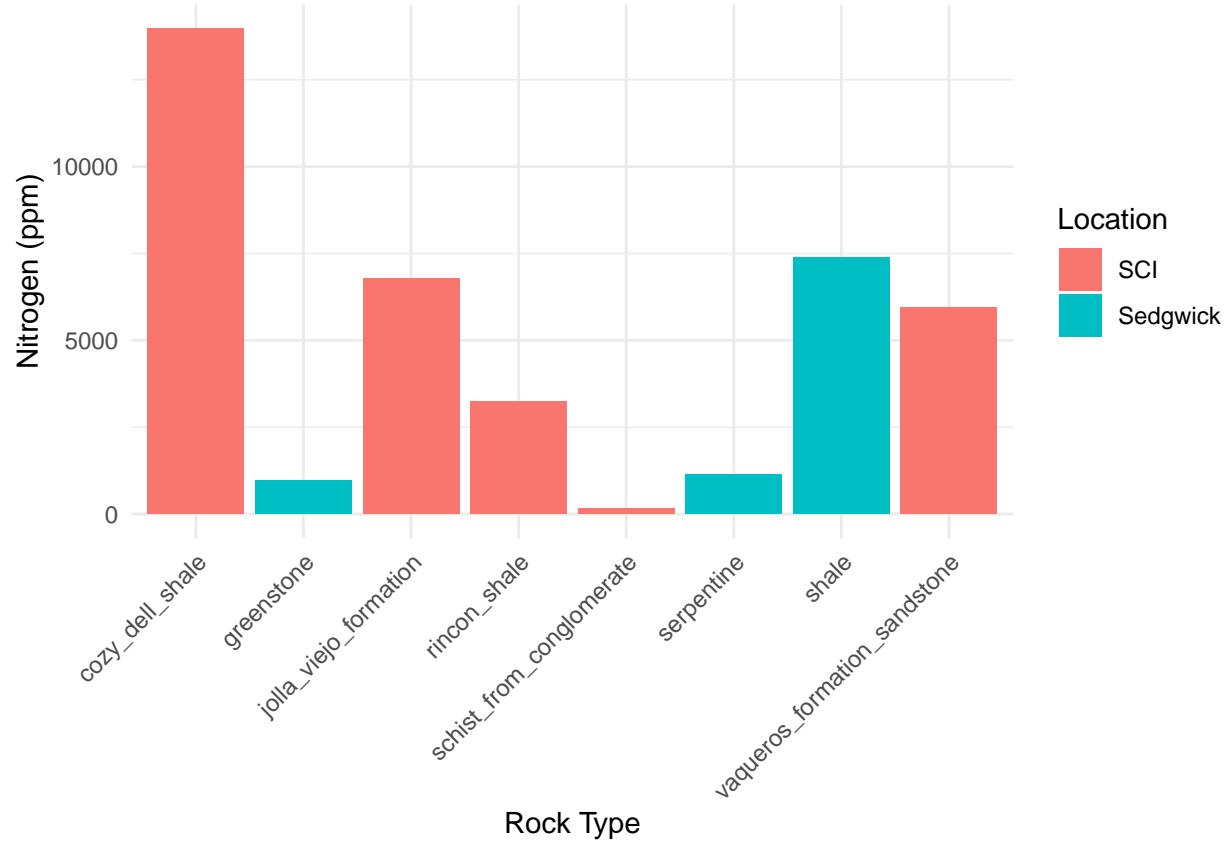


Average Nitrogen (ppm) per Sample

Sample Name	Rock Type	Not Peroxide Soaked	Peroxide Soaked
Sedgwick			
brncp1	shale	1,211.79	1,249.58
trncp1	greenstone	51.68	52.54
trwcp1-1	serpentine	87.58	84.14
trwcp1-2	serpentine	113.73	90.31
trwcp1-3	serpentine	182.57	179.52
trwcp1-4	greenstone	107.65	70.98
trwcp1-5	greenstone	269.77	214.27
SCI			
sci-blue-schist	schist_from_conglomerate	83.79	76.19
tcd-1	cozy_dell_shale	647.47	441.60
tcd-2	cozy_dell_shale	768.96	807.43
tcd-3	cozy_dell_shale	854.76	771.61
tjv-1	jolla_viejoFormation	532.10	557.73
tjv-2	jolla_viejoFormation	611.48	561.99
tr-1	rincon_shale	279.37	330.63
tr-2n	rincon_shale	232.17	234.24
tvs-c	vaquerosFormation_sandstone	310.54	268.55
tvs-s	vaquerosFormation_sandstone	885.55	907.75

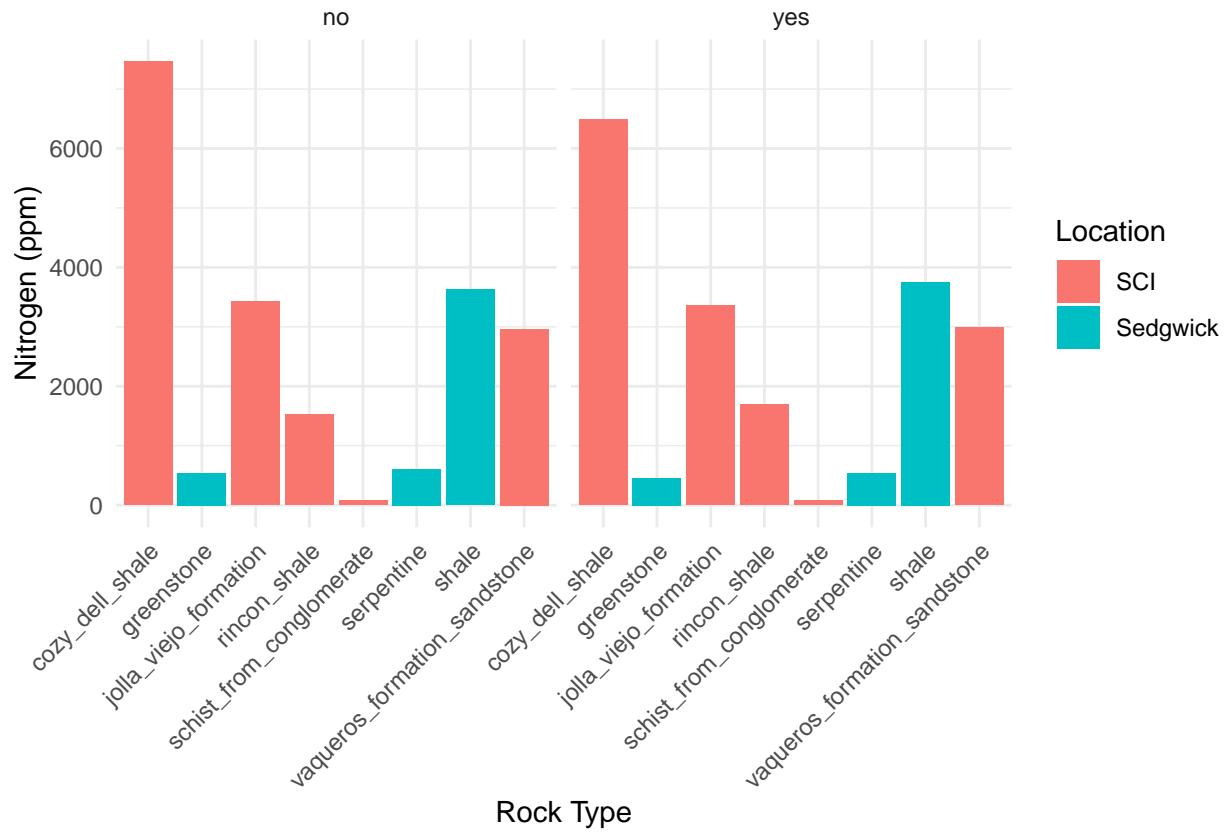
Visualization 2: Nitrogen by Rock Type and Location

This plot displays nitrogen values stacked by location within each rock type.



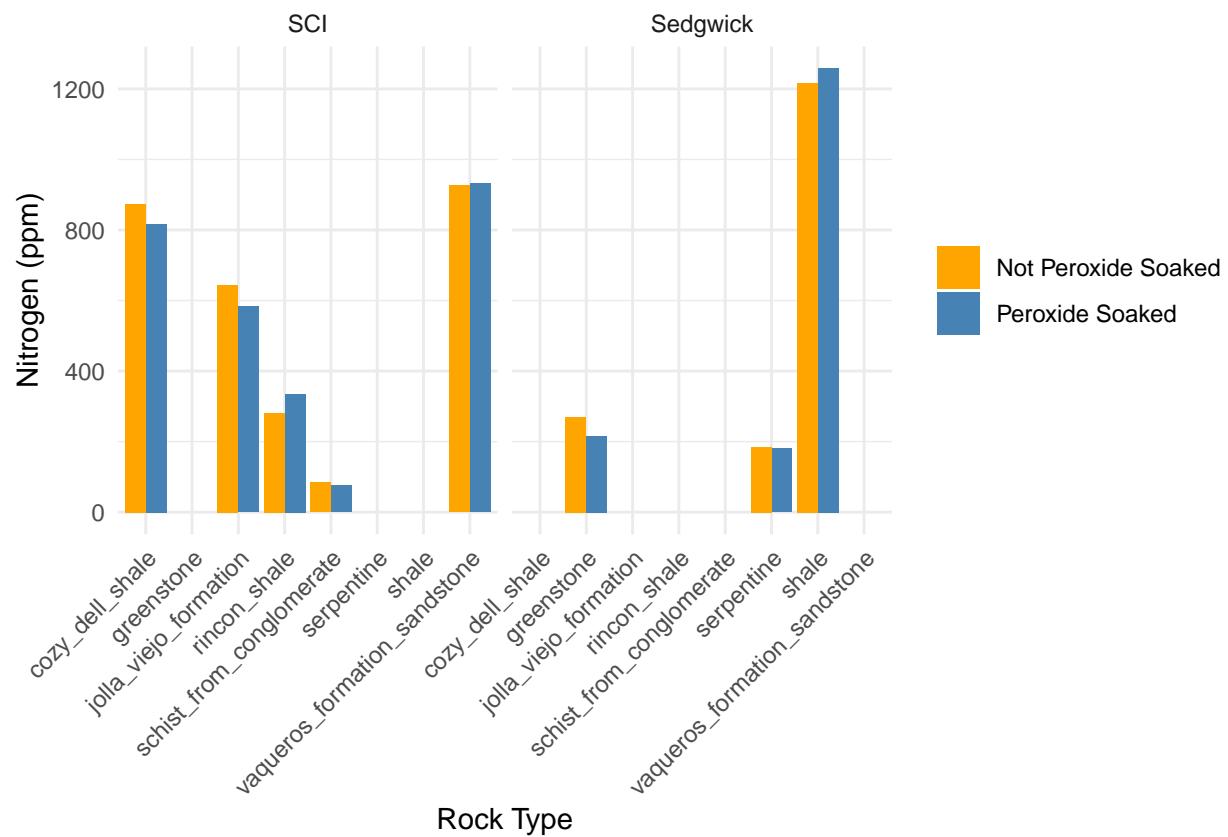
Visualization 3: Nitrogen by Location, Faceted by Treatment

This figure separates samples into two panels — soaked vs not soaked — while showing contributions from each location.

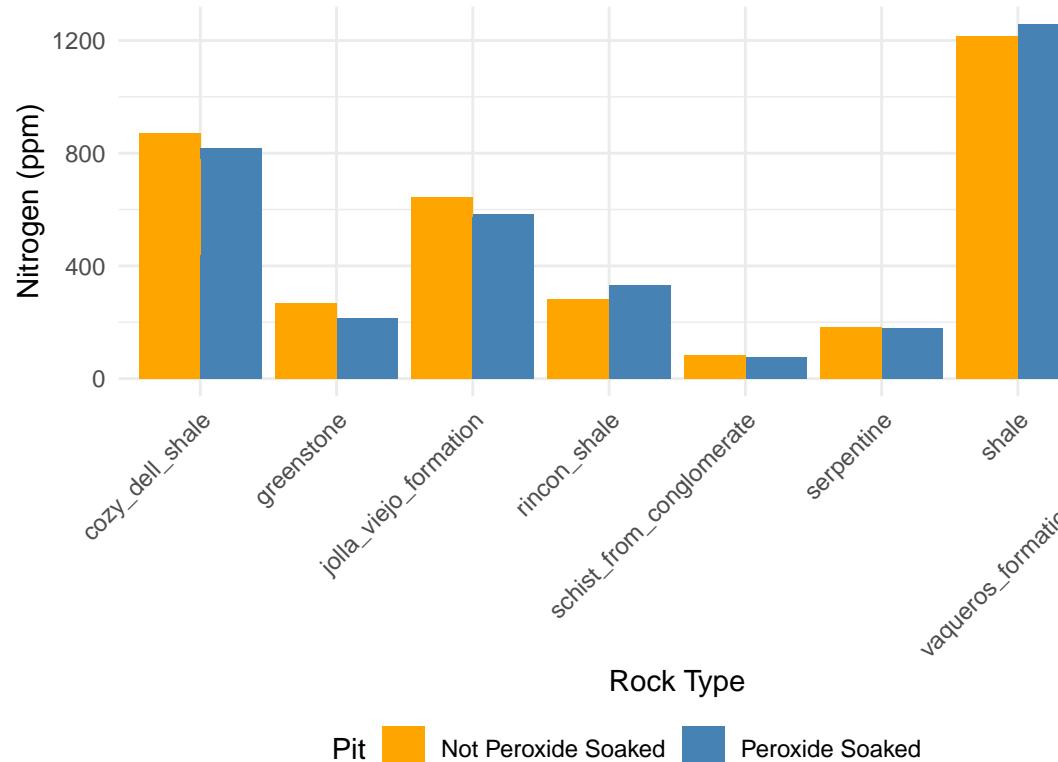


Visualization 4: Nitrogen by Treatment, Faceted by Location

This flips the previous comparison. Now each panel is a location, and bars compare soaked vs not soaked.



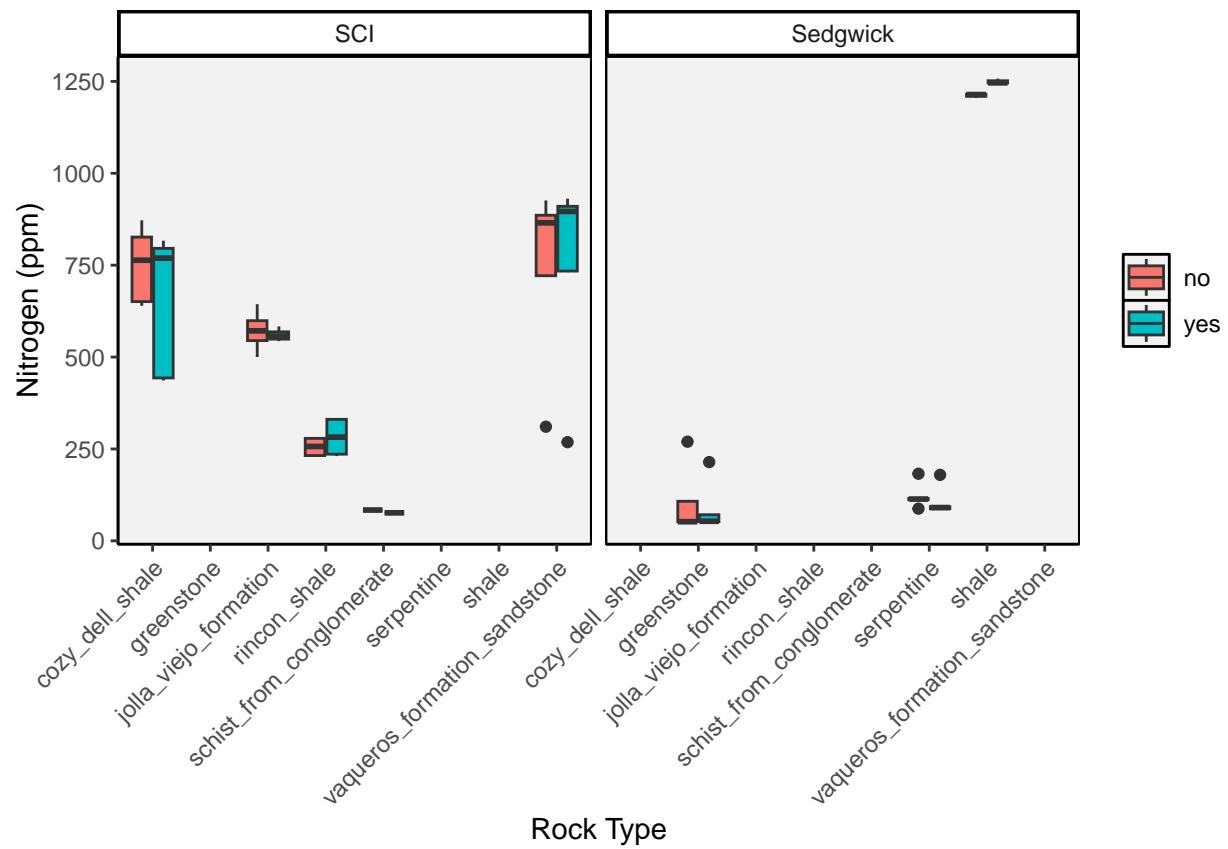
Nitrogen Concentrations by Rock Type



Alternative: *Under Construction*

Visualization 5: Boxplot of Nitrogen Values

This boxplot shows the distribution of nitrogen per rock type, separated by location.



Visualization 6

Side-by-side bar plot using rock average *under construction*

Visualization 7

Boxplot by rock type, filled by location *under construction*

Still a work in progress...