Article

Seasonal salinization decreases spatial heterogeneity of sulfate reducing activity: A modified IRIS method characterization

Valerie A. Schoepfer 1,2,\*, Amy J. Burgin 1,3, Terry D. Loecke 1,3 and Ashley M. Helton 4

1 School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE, USA.

2 Current Address: Southern Cross GeoScience, Southern Cross University, PO Box 157, Lismore, New South Wales 2480, Australia; vaschoepfer@gmail.com

3 Current Address: University of Kansas and Kansas Biological Survey, Lawrence, KS, USA; burginam@ku.edu; loecke.terry@ku.edu

4 Department of Natural Resources and the Environment, and the Center for Environmental Sciences and Engineering, University of Connecticut, Storrs, CT, USA; Ashley.Helton@uconn.edu

**\*** Correspondence: vaschoepfer@gmail.com

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Supplemental Information

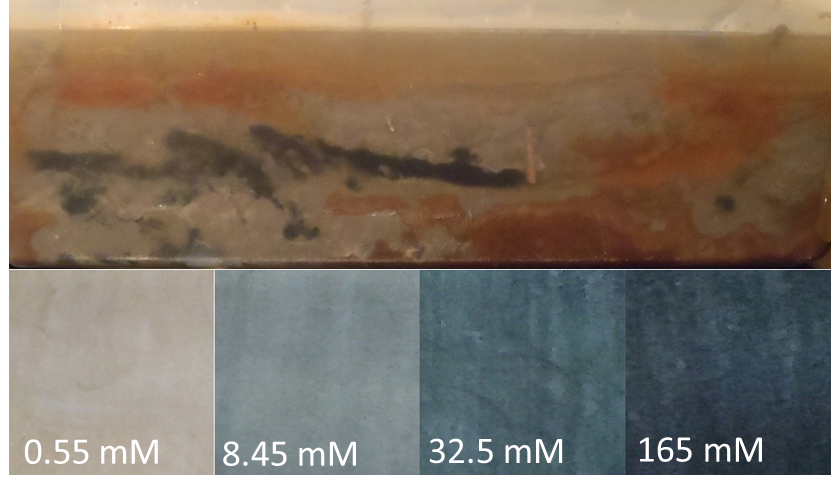


Figure S1: FeS spatial distribution and standards.

Top photo: A clear tub filled with sediment from the Timberlake site. Orange streaks are iron(III) oxides, while the black streaks are FeS complexes *in situ*. The bottom panel depicts the plate standard gradient after being soaked in a sodium sulfide solution for 24 hours.

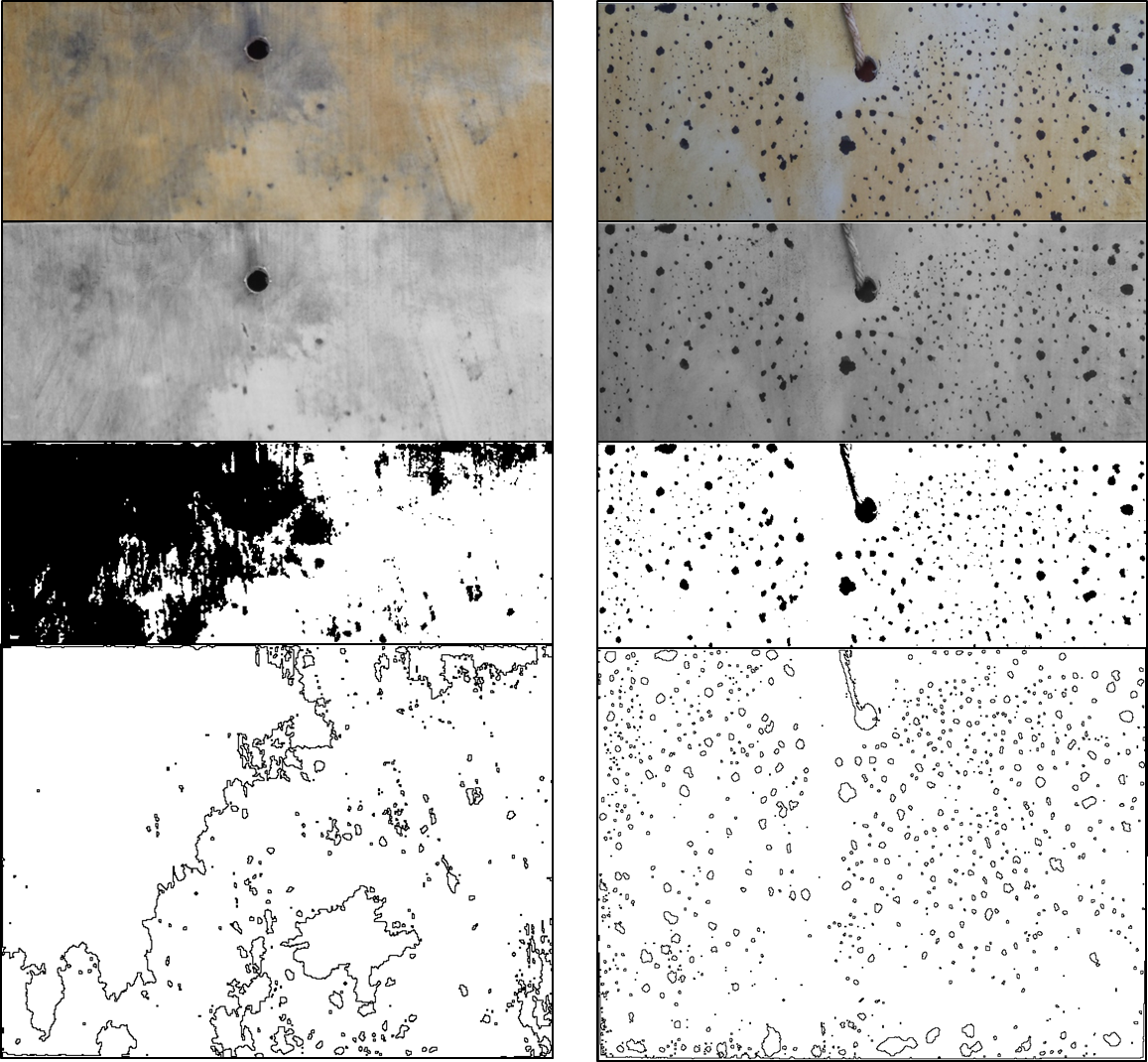
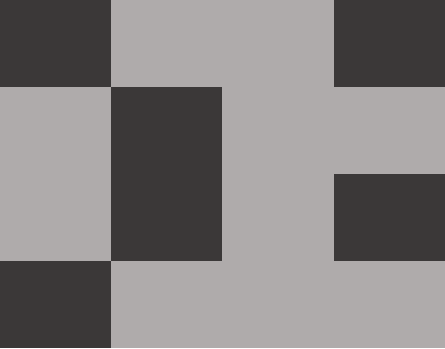
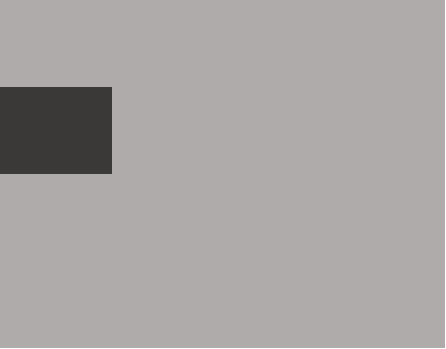


Figure S2: Example image flow: Two plates following the same image processing flow beginning with 1) a raw, cropped plate, 2) a greyscale plate, 3) the same plate converted to a threshold (black and white), and 4) an outline of each complex for analysis.

a. b.

Figure S3. a) A model plate with a smaller nugget parameter. There is less distinct change when looking at the entire plate as a whole. b) A model plate with a larger nugget, or a plate with distinct differences between the background and the colored location.

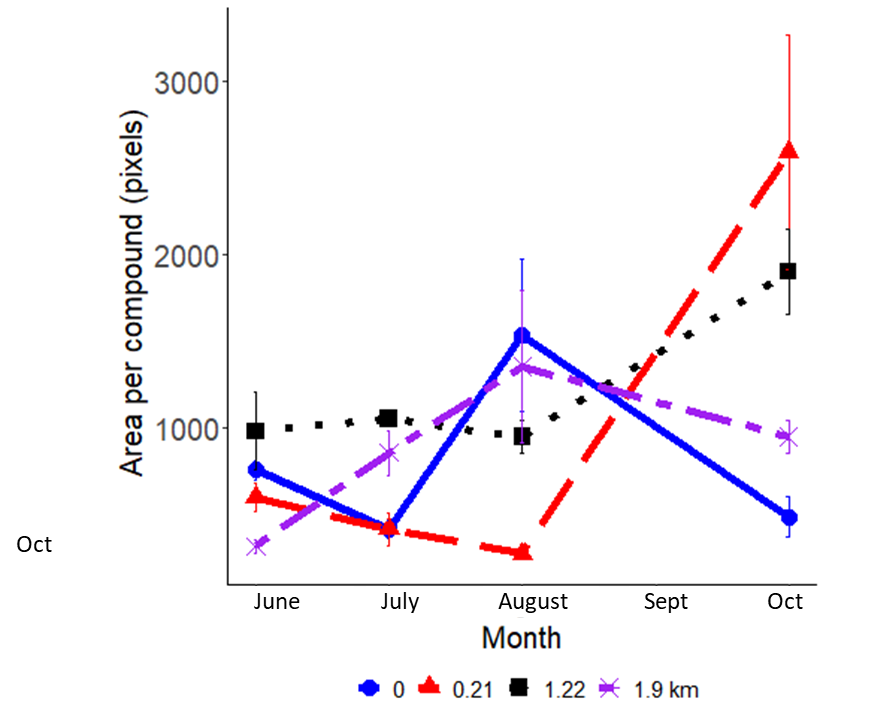


Figure S4. The average area per complex as depicted according to month and distance. Values were determined through division of the total area occupied by the colored pixels divided by the number of colored pixels. Error bars denote standard errors.



Figure S5. A histogram of the concentrations found per pixel on one plate. The x-axis shows the concentrations (a value of zero here equaling no FeS, and a value of 255 indicating complete black with intermediate values as varying shades of grey. The frequency of each concentration per pixel is found on the y-axis. Among this plate, there are more lighter colored pixels and fewer darker pixels in August at 0 km. This analysis is conducted before the semivariogram procedure, resulting in only 5 plates per site and distance, however this encompasses all pixels on the plate. A similar procedure can be conducted for each plate and compared among site and time.