

Supplementary Materials for
**Phosphorus, not nitrogen, limits plants and microbial primary
producers following glacial retreat**

John L. Darcy, Steven K. Schmidt, Joey E. Knelman, Cory C. Cleveland, Sarah C. Castle,
Diana R. Nemergut

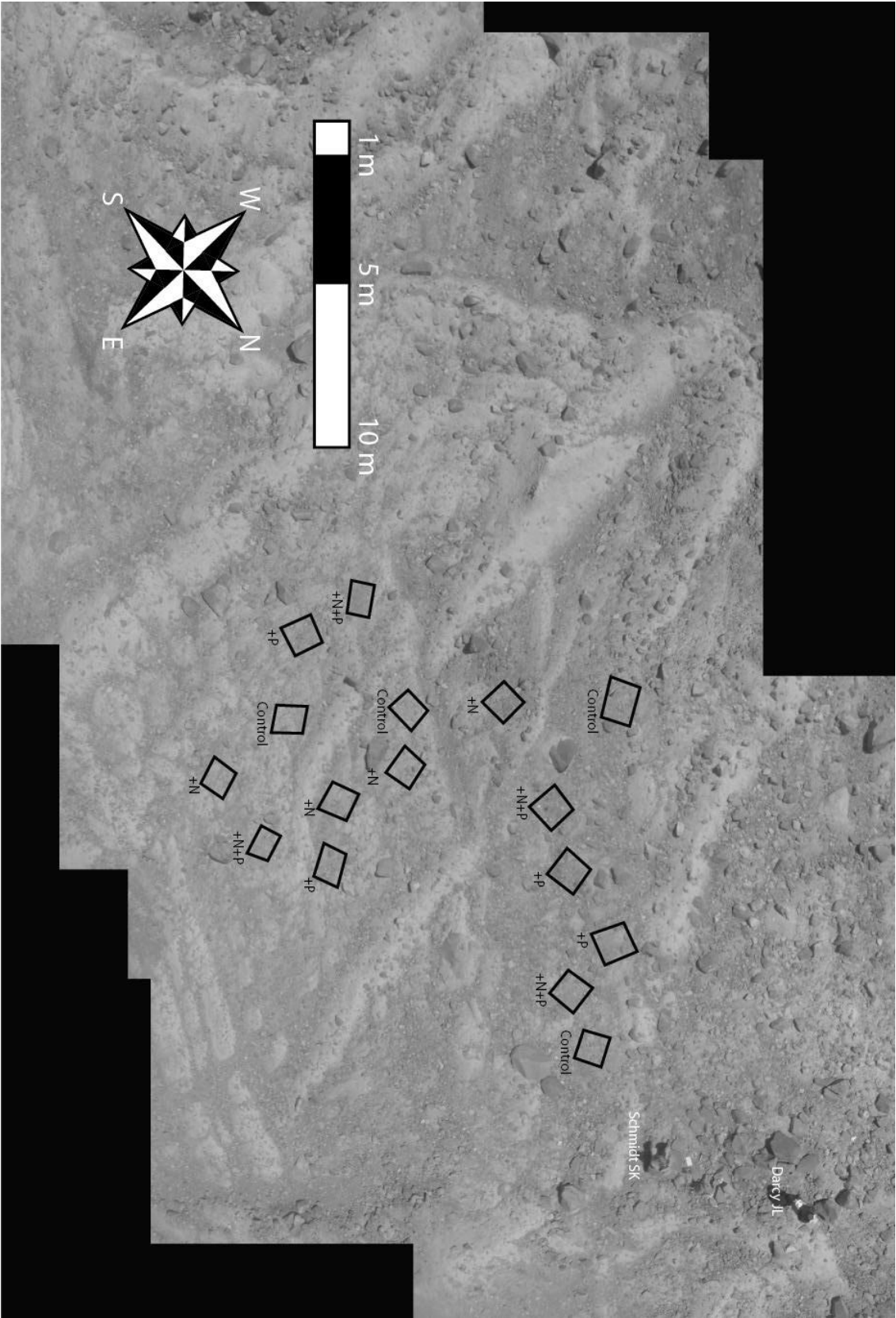
Published 23 May 2018, *Sci. Adv.* **4**, eaag0942 (2018)
DOI: 10.1126/sciadv.aag0942

This PDF file includes:

- table S1. Element analysis results from x-ray fluorescence analysis.
- fig. S1. Aerial view of the Puca Glacier field site, showing plot layout and orientation.

table S1. Element analysis results from x-ray fluorescence analysis. Concentrations of elements within dry soil from the Puca Glacier site were determined in 2009 (18) using a Phillips PW1400 Wavelength Dispersive Spectrometer X-ray fluorescence instrument. These results show that the total pool of potassium (K) in these early-successional soils is an average of 38.749 times larger than the total pool of phosphorus (P) by weight (bottom row). Stoichiometrically, K is on average 48.914 times more common than P.

	Mean	SD	n
µg/g Fe	2.159	0.386	3
µg/g Mn	0.039	0.008	3
µg/g Ti	0.351	0.083	3
µg/g Ca	4.554	0.840	3
µg/g Al	7.277	0.853	3
µg/g Mg	0.814	0.214	3
µg/g Na	0.534	0.117	3
µg/g Si	32.997	1.442	3
µg/g K	2.355	0.253	3
µg/g P	0.061	0.004	3
K:P Ratio	38.749	5.401	3



Darcy JL

Schmidt SK

fig. S1. Aerial view of the Puca Glacier field site, showing plot layout and orientation. This figure is a drone-selfie taken in 2015 by the authors (pictured). Multiple images, taken from the drone using a timer, were composited using Adobe Photoshop software. The glacier itself is not visible in the image, but the terminus was located approximately 150 m north east of the plots. Plot shapes appear irregular because the image is slightly distorted from the composition process and from the fish-eye lens used on the GoPro camera that was flown over the plots. To capture this image, small markers were placed in the corners of each plot, which were then digitally connected together to form the plot outlines seen here. These photographs were taken using the specially modified GoPro camera that senses near infra-red light (see Fig. 2), in an effort to compare the plots using the drone. However, the camera's resolution was insufficient for that purpose.