

Refereed Journal Articles

- Rankin, AH, Pressel, S, Duckett, J, Remington, W, Hawes, I, Sumner, DY, **Mackey, TJ**, Castendyk, D, Schneider, H, Jungblut, AD (accepted) Characterisation of a deep-water moss from the perennially ice-covered Lake Vanda, Antarctica. *Polar Biology*.
- Mackey, TJ**, Sumner, DY, Hawes, I, Jungblut, AD, Lawrence, J, Leidman, S, Allen, B (in press) Increased mud deposition reduces stromatolite complexity. *Geology*, DOI:10.1130/G38890.1
- Sumner, DY, Jungblut, AD, Hawes, I, Andersen, DT, **Mackey, TJ**, Wall, K (2016) Growth of elaborate microbial pinnacles in Lake Vanda, Antarctica. *Geobiology*, 14(6): 556-574. DOI:10.1111/gbi.12188
- Jungblut, AD, Hawes, I, **Mackey, TJ**, Krusor, M, Doran, P, Sumner, DY, Eisen, J, Hillman, C, Goroncy, A (2016) Microbial mat communities along an oxygen gradient in a perennially ice-covered Antarctic lake. *Applied and Environmental Microbiology*, 82(2): 620-630. DOI:10.1128/AEM.02699-15
- Sumner, DY, Hawes, I, **Mackey, TJ**, Jungblut, AD, Doran, P (2015) Antarctic microbial mats: A modern analog for Archean lacustrine oxygen oases. *Geology*, 43: 887-890. DOI:10.1130/G36966.1
- Zhang, L, Jungblut, AD, Hawes, I, Andersen, DT, Sumner, DY, **Mackey, TJ** (2015) Cyanobacterial diversity in benthic mats of the McMurdo Dry Valley lakes, Antarctica. *Polar Biology*, 38: 1097-1110. DOI:10.1007/s00300-015-1669-0
- Mackey, TJ**, Sumner DY, Hawes I, Jungblut AD, Andersen DT, (2015) Growth of modern branched columnar stromatolites in Lake Joyce, Antarctica. *Geobiology*, 13: 373-390. DOI:10.1111/gbi.12138
- Harwood Theisen, C, Sumner, DY, **Mackey, TJ**, Lim, DS, Brady, AL, Slater, GF (2015) Carbonate fabrics in the modern microbialites of Pavilion Lake: two suites of microfabrics that reflect variation in microbial community morphology, growth habit, and lithification. *Geobiology* 13:357-372. DOI:10.1111/gbi.12134
- Hawes, I, Sumner, DY, Andersen, DT, Jungblut, AD, **Mackey, TJ** (2013) Timescales of growth response of microbial mats to environmental change in an ice-covered Antarctic lake. *Biology*, 2: 151-176. DOI:10.3390/biology2010151
- Hawes, I, Sumner, DY, Andersen, DT, and **Mackey, TJ** (2011) Legacies of recent environmental change in the benthic communities of Lake Joyce, a perennially ice-covered Antarctic lake. *Geobiology* 9, 394-410. DOI:10.1111/j.1472-4669.2011.00289.x
- Runkel, A, **Mackey, TJ**, Cowan, C, and Fox, D (2010) Tropical Shoreline Ice in the Late Cambrian: Implications for Earth's climate between the Cambrian Explosion and the Great Ordovician Biodiversification Event. *GSA Today* 20(11), 4-10. DOI: 10.1130/GSATG84A.1

Selected Presentations (asterisk denotes undergraduate mentee)

- Mackey, TJ**, Bergmann, KD, Fairchild, I (2017) Carbonate clumped isotope temperatures from the onset of the Cryogenian. *Goldschmidt*.
- Jost, AB, **Mackey, TJ**, Bergmann, KD (2017) Preliminary temperature records from Marinoan-age low latitude carbonates. *Goldschmidt*.
- Matys, ED, **Mackey, TJ**, Sumner, DY, Krusor, M, Wall, K, Jungblut, A, Hawes, I, Mueller, E, Summons, RE (2017) Bacteriohopanepolyols across environmental gradients in ice-covered lakes of the McMurdo Dry Valleys, Antarctica. *Astrobiology Science Conference*
- Mackey, TJ**, Sumner, DY, Hawes, I, Jungblut, AD, *Leidman, SZ, Andersen, DT (2016) Stromatolites record changing primary productivity in perennially ice-covered Lake Joyce, McMurdo Dry Valleys, Antarctica. *American Geophysical Union, Fall Meeting*, abstract B43D-06.
- Mackey, TJ**, *Leidman, S, *Allen, B, Hawes, I, Lawrence, J, Jungblut, AD, Krusor, M, Coleman, L, Sumner, DY (2015) Characterizing microbial mat morphology with Structure from Motion techniques in ice-covered Lake Joyce, McMurdo Dry Valleys, Antarctica. *American Geophysical Union, Fall Meeting*, abstract C41D-0726.
- Mackey, TJ**, Sumner, DY, Hawes, I, Jungblut, AD, Andersen, DT (2015) Calcification of Modern Stromatolites from Lake Joyce, McMurdo Dry Valleys, Antarctica: Preserved Carbon Pool Modification in a Changing Microbial Ecosystem. *Astrobiology Science Conference*.
- *Leidman, SZ, **Mackey, TJ**, Sumner, DY (2015) Quantitative Analysis of Microbial Mat Morphologies via Structure from Motion Reconstructions. *Astrobiology Science Conference*.
- *Allen, B, **Mackey, TJ**, Lawrence, J, *Leidman, S, Hawes, I, Krusor, M, Mowchan, L, Jungblut, AD, Sumner DY (2015) Analysis of Webbed Pinnacle Microbial Mat Variation Along a Decreasing Sediment Gradient in Lake Joyce, Antarctica. *Astrobiology Science Conference*.
- Mowchan, LE, **Mackey, TJ**, Sumner, DY, Krusor, M (2015) Astrobiology Lessons Comparing Lake Joyce, Antarctica and Mars. *Astrobiology Science Conference*.
- Mackey, TJ**, *Leidman, S, Sumner, DY, Hawes, I, Jungblut, AD, Castendyk, D (2014) Benthic microbial mat expansion and nutrient uptake during lake level rise in ice-covered Lake Vanda, McMurdo Dry Valleys, Antarctica. *Ecological Society of America Annual Meeting*.
- Lim, DSS, Hawes, I, **Mackey, TJ**, Brady, AL, Biddle, J, Andersen, DT, Belan, M, Slater, G, Abercromby, A, Squyres, SW, Delaney, M, Haberle, CW, Cardman, Z (2014) The microbial mats of Pavilion Lake microbialites: examining the relationship between photosynthesis and carbonate precipitation. *American Geophysical Union, Fall Meeting*, abstract #B23A-0183.
- Mackey, TJ**, Sumner, DY, Krusor, M, Wall, K, Hawes, I, Jungblut, AD, Andersen, DT (2013) Microbial mat morphology as a record of environmental change in perennially ice-covered Lake Joyce, Antarctica. *Polar and Alpine Microbiology conference*.

Mackey, TJ, Hawes, I, Forrest, A, Sumner, DY, Jungblut, AD, Doran, P (2013)
Environmental influences on microbial mat biogeography in perennially ice-
covered Lake Fryxell, Antarctica. Strategic Science in Antarctica Conference.