

NICOLE PIETRASIAK

Nicole Pietrasiak is fascinated by the overarching question of how algal diversity matters to dryland ecosystem functioning and health. In her research she quantifies and discovers dryland algal diversity with a focus on cyanobacteria. She also investigates the roles of cyanobacteria in dryland ecosystem functioning and soil health, especially when they form biological soil crusts. Recently, her work has centered around the identification of key cyanobacterial taxa and their traits important for bioprospecting and resource management. Her research team applies a variety of diverse approaches including cutting edge DNA based techniques and bioinformatics, advanced microscopy, traditional microbial isolation, and culturing methods, as well as soil ecological, field biological, and landscape ecological methods to study dryland algae. Her research is highly interdisciplinary and addresses questions in resource management, ecology, biogeography, and systematics of algae in the most arid soils and rock substrates of the Americas.

1. Baldarelli, L.M., **Pietrasiak, N.**, Osorio-Santos, K., Johansen, J.R. 2022. *Mojavia aguilerae* and *M. dolomitestrus* – two new Nostocaceae (Cyanobacteria) species from the Americas. *Journal of Phycology*, 48: 502-516. <https://doi.org/10.1111/jpy.13275>

2. **Pietrasiak, N.**, Reeve, S., Osorio-Santos, K., Lipson, D., Johansen, J.R. 2021. *Trichotorquatus* gen. nov. - a new genus of soil cyanobacteria discovered from American Drylands. *Journal of Phycology*, 57 (3): 886-902. <https://doi.org/10.1111/jpy.13147>

3. **Pietrasiak, N.**, Osorio-Santos, K., Shalygin, S., Martin, M.P., Johansen, J.R. 2019. When is a lineage a species? A case study in *Myxacorys* gen. nov. (Synechococcales: Cyanobacteria) with the description of two new species from the Americas. *Journal of Phycology*, 55: 976–996. <https://doi.org/10.1111/jpy.12897>

4. **Pietrasiak, N.**, Mühlsteinová, R., Siegesmund, M., Johansen, J.R. 2014. Phylogenetic placement of *Symplocastrum* (Phormidiaceae, Cyanobacteria) with descriptions of two new species: *S. flechtnerae* and *S. torsivum*. *Phycologia*, 53: 529–541. <https://doi.org/10.2216/14-029.1>

5. Osorio-Santos, K., **Pietrasiak, N.**, Bohunická, M., Miscoe, L.H., Kovácik, L., Martin, M.P., Johansen, J.R. 2014. Seven new species of *Oculatella* (Pseudanabaenales, Cyanobacteria). *European Journal of Phycology*, 49: 450–470. <https://doi.org/10.1080/09670262.2014.976843>

Nicole Pietrasiak received her first M.S. degree at the University of Leipzig, Germany, with a focus on Physical Geography, a 2nd M.S. degree in Biology at John Carroll University in Cleveland, OH, and her Ph.D. in Soil and Water Sciences at University of California, Riverside. In 2015 she was hired as an Assistant Professor of Environmental Soil Microbiology in the Plant and Environmental Sciences Department in the College of ACES, New Mexico State University where she received tenure in 2022. She joined the University of Nevada, Las Vegas in January

2023 as an Associate Professor of Sustainability in Arid Lands in the School of Life Sciences,
College of Sciences.