

Understanding the ecology of the volvocine green algae

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Abstract:

The ecology of the volvocine green algae is central to better understanding the evolution of multicellularity in this clade. However, relatively little is known about the ecology of these cosmopolitan, freshwater algae. Here, we present the methods and preliminary results from an ongoing project that aims to better understand volvocine algae ecology by systematically collecting samples at two sites in southern Arizona, Reid Park and Peña Blanca Lake. Both of our sites are known to harbor at least one species of volvocine algae. We examine several abiotic factors that may affect changes in the abundance of volvocine algae species, including temperature, rainfall, pH, nitrate, phosphate and dissolved oxygen content of the water. We also use high-throughput imaging instrument to examine biotic factors, including the abundance of algal predators and potential competitors. We welcome input, data sharing and potential collaborations.