

ORAL PRESENTATION

PALEOLIMNOLOGY AND RESURRECTION ECOLOGY: THE FUTURE OF RECONSTRUCTING THE PAST

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Paleolimnologists have utilized diatom lake sediment records to understand historical lake and landscape development, timing and magnitude of environmental change at lake, watershed, regional and global scales, and as historical datasets to target watershed and lake management. Resurrection ecologists have begun to recognize lake sediments as sources of viable diatom propagules (“seed or egg banks”) with which to explore questions of community ecology, ecological response, and evolutionary ecology. To date, *Daphnia* is the only model organism in these efforts, but many other aquatic biota, from viruses to macrophytes, and diatoms in particular, similarly produce viable propagules that are incorporated in the sediment record but have been underutilized in resurrection ecology. The common goals shared by these two disciplines have led to mutualistic and synergistic collaborations - a development that must be encouraged to expand. We give an overview of the achievements of paleolimnology and the reconstruction of environmental history of lakes, review the untapped diversity of aquatic organisms that produce dormant propagules, compare *Daphnia* as a model of resurrection ecology with other organisms amenable to resurrection studies, especially diatoms, and consider new research directions that represent the nexus of these two fields.