

POSTER PRESENTATION

DIATOM COMMUNITIES OF TRAVERTINE-PRECIPITATING SPRINGS ON A GRADIENT OF ANTHROPOGENIC DISTURBANCE IN THE SANDIA MOUNTAINS, NEW MEXICO

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Carbonate-rich waters of travertine-precipitating springs facilitate unique physiochemical environments that support distinct diatom species assemblages adapted to the environmental stress of constant carbonate precipitation. Spring systems are further limited by the impacts of historical and ongoing anthropogenic disturbance which includes recreational activity and hydrologic modification of springs using spring boxes and wells. This study focused on impacts of water chemistry and anthropogenic disturbance on diatom assemblages found in travertine-precipitating springs. Data were collected in the fall and spring at eight spring sites, including six known to precipitate travertine, in the Sandia Mountains of central New Mexico. Water chemistry, benthic diatoms, sediment composition, percent organic matter, and categorical disturbance variables were analyzed. Hydrochemical analysis showed seven springs are dominated by Ca-HCO₃ and one was mixed Ca-Mg-Cl type. Common diatom taxa include indicators of high conductivity (e.g., *Diploneis oblongella*, *Pinnularia* spp.), flowing water (e.g., *Meridion circulare*), and sediment substrates (e.g., *Surirella* spp., *Planothidium* spp.). Diatom assemblage analysis, disturbance characterization, and other biological assessments can be used to prioritize restoration of springs with unique habitats, such as travertine-precipitating springs.