

Ecosystem consequences of riparian restoration involving removal of *Tamarix spp.* in the southwestern U.S.



Science & Mathematics Colloquium Series

Presentation by Anna Sher

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Thurs., April 6, 2017, 3 p.m.

Santan Hall, Room 331

ASU Polytechnic campus

Ecological restoration of river systems in arid regions of the United States often include large-scale efforts to remove invasive exotic *Tamarix spp.* (saltcedar, tamarisk) trees. Of particular concern and interest is the impact of a biological control insect, *Diorhabda spp.*, that has been successfully defoliating these trees. "Analyzing plant community data from 400+ sites across the southwestern U.S., we have identified several environmental and management factors that explain when and where *Tamarix* removal by the bio-control and traditional methods results in "successful" restoration. Our NSF-sponsored research involves deeper exploration of the human component by using multivariate analysis of data from surveys of land managers to better understand whether the attitudes and backgrounds of the people doing the restoration matters for outcomes. Our ultimate goals are to improve ecological restoration in arid lands while illuminating more general principles about the impact of anthropogenic activity on ecosystems."

Faculty and practitioners discuss their current research and field projects in the college's Science and Mathematics Colloquium Series, held throughout the academic year at the ASU Polytechnic campus. All seminars are free and open to the public.

Dr. Anna Sher is an applied plant ecologist with a research focus on conservation and restoration. Her current NSF grant explores the interaction of the human element with the natural environment for restoration success. Her well-cited published works include three best practices guides and books from major publishers, including "An Introduction to Conservation Biology" and "*Tamarix: A Case Study of Ecological Change in the American West.*" Sher earned her PhD in biology from the University of New Mexico studying *Tamarix* ecology and interspecific competition; she went on to study those topics in Israel for two years on a Fulbright fellowship. She completed a post doc on invasive riparian plants at UC-Davis before accepting a joint position as the director of research at Denver Botanic Gardens and a tenure-track professorship at the University of Denver, where she is currently a full professor.



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