Feb 2nd, 9:30 AM - 3:30 PM

Research poster: Biotic responses to climate change in the Mojave Desert: Floristics

Patrick Leary  
*College of Southern Nevada*

David Charlet  
*College of Southern Nevada*

Repository Citation

https://digitalscholarship.unlv.edu/epscor/2010/feb02/23

This Event is brought to you for free and open access by the Conferences/Meetings (NNE) at Digital Scholarship@UNLV. It has been accepted for inclusion in 2010 Annual Nevada NSF EPSCoR Climate Change Conference by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.
"Biotic Responses to Climate Change in the Mojave Desert: Floristics"
Patrick Leary and David Charlet, College of Southern Nevada

ABSTRACT
The objective of this study is to establish baseline plant distribution data in Clark County, Nevada, with particular emphasis on the Spring Mountains and Sheep Range. Precise location data and photographic records were collected for each sample. Future researchers can relocate the sample points, reconstruct the species lists, and compare these lists to the baseline data. We predict that if a warming trend occurs, the upper and lower limits of a species will be higher than what we have recorded. If a cooling trend occurs, the upper and lower limits will decline.

METHODS.
Samples (n = 1425) are located in the middle of a recognizable vegetation and landform unit. Samples in 2008 (n = 300) were plots by the methods the National Vegetation Classification system. Plots are typically 20 m x 20 m (400 m$^2$), but for narrow features such as riparian areas, we varied the dimensions but never the area to capture the formation of interest. In 2009, larger sample areas were employed we call “waypoints.” Waypoints are likewise located in a recognizable vegetation and landform unit. Their maximum size is a circle with a radius of 100 m from the point. The vegetation was described and data compiled for use in Charlet and Leary (2010) using the same sample points. For the floristic portion of the project (this work), the presence of each species was recorded and compiled into a separate spreadsheet.

RESULTS
New Additions to the Flora. Six species new to the Spring Mountain Range were added to the known flora of approximately 1015 taxa. These are:

- **Achnatherum webberi** (Thurber) Barkworth. Weber needle grass.
- **Eleocharis palustris** (L.) Roemer & Schultes. Common spikerush.
- **Elymus glaucus** Buckley. Blue wildrye.
- **Hedeoma drummondii** Briq. Drummond’s false pennyroyal.
- **Isocoma acradenia** (Greene) Greene var. acradenia Alkali jimmyweed.
- **Phacelia palmeri** Torrey ex S. Watts. Palmer’s phacelia.

Sensitive Species. One of the important outcomes of this study is to provide precise location data of special status species. Of the 68 special status species in Clark County, we documented 468 occurrences of 29 of these in 2008-2009. These occurrence data are tied to the vegetation data collected in Charlet and Leary (2010), and so each record comes with precise location, elevation, slope, plant community, associated species, exposure, and substrate.

- **Ivesia jaegeri**

**References:**