

Plant ecologist Dr. Lynn Sweet is an associate specialist at the Center for Conservation Biology at UC Riverside's Palm Desert Center, and her work mostly focuses on the establishment of invasive plants into new landscapes. Before coming to Palm Desert, she was a post-doctoral researcher at the University of California, Santa Barbara.

At UCR she continues her work looking at native and invasive plant species distributions in the Coachella Valley and beyond. Her work now spans several disciplines; she has focused not only on plant ecology but also biogeography and invasion biology in order to answer questions about why plants occur where they do, and where they may occur with future climate change.

UCR PALM DESERT CENTER: After years of work near the coast, what brought you to the desert?

LYNN SWEET: My post-doctoral work at another UC focused on tree establishment in California woodlands. When that project wrapped up, I was looking to continue work in plant ecology. Since I did some of my graduate work at Boyd Deep Canyon UC Reserve, I was excited to find an opportunity to continue doing academic research in California's diverse and unique desert ecosystem.

UCRPDC: What does invasion biology have to do with climate change?

SWEET: Both climate change and invasive, non-native species are acting to change the California native ecosystem by changing the environmental resources and conditions available to native species. So if you are concerned with maintaining native desert plant and animal communities, you should be concerned about both of these things. Unfortunately, climate change may impact species differently, benefiting some invasive species more than the native species going forward. Many invasives that are successful outcompete native species by growing earlier or bigger and monopolizing resources like water and nutrients. Some of these invasives are also more able to deal with and succeed in the variable climate conditions predicted to arrive with further climate changes, for example, rain falling more sporadically/less often but in greater amounts.

UCRPDC: What's a typical workday like for you?

SWEET: Like everyone, I do a lot of communicating over email, mostly with federal, state, local and non-profit partners! We collaborate, exchanging data and information quite a bit. Where I would like to be all the time, outdoors in the field, I am out in very beautiful and biologically-diverse corners of the Coachella Valley that are set aside as conservation areas. We hike up flower-covered hillsides, see gorgeous views of the mountains, rock formations and we also take time to check out lizards and insects along the way. I work with a team including some community volunteers to collect data in plots on the ground- counting and identifying species, or looking across the landscape and recording what species are most abundant. Very often I'm spending much of my day working with datasets, creating maps, doing analysis in ArcGIS or R, and making written summaries. Other times I'm revising manuscripts for publication.

UCRPDC: What role does the Center for Conservation Biology play in our greater understanding of the world?

SWEET: The research we do and the information we collect first of all is meant to deal with real environmental problems and concerns. We approach these issues from a science standpoint, designing studies or experiments to gather data that will help guide decision making (or often, further investigation of the issue). For example, how are invasive plants affecting habitat for certain endangered animals in the sand dune system locally? This type of information feeds into not only conservation planning, but vegetation maps and other resources for public agencies.

UCRPDC: What would surprise people most about the work you do at UCR Palm Desert?

SWEET: How much of my job is focused on data processing, coding, spatial and other data analyses as opposed to physically going out onto the landscape. But I do a fair bit of that as well.