

Art exhibit depicts present-day choices and potential future of the Sierra Nevada mountain range

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Derek Norpchen with the maps and visualization animations he helped create for the "Helen Mayer Harrison & Newton Harrison - Sierra Nevada: An Adaptation," exhibition. The project at the Nevada Museum of Art explores two contrasting visions: one in which "nature" is left to follow its course responding to warming, and another in which humans play a more active role in establishing new species in the area that are better adapted to the new conditions.

Photo by Derek Norpchen

RENO, Nev. — Scientists from the University of Nevada, Reno helped renowned environmental artists Helen Mayer Harrison and Newton Harrison create an exhibition on display at the Nevada Museum of Art in downtown Reno that predicts the potential effects of climate change on the Sierra Nevada mountains.

"The exhibition by the Harrisons helps people see how climate change may alter natural areas that many of us enjoy," Thomas Albright, professor of geography in the University's College of Science, said.

Their project, "Helen Mayer Harrison & Newton Harrison – Sierra Nevada: An Adaptation," explores how the Sierra Nevada might look decades from now and how choices society makes may shape different outcomes. The work was commissioned by the museum.

Derek Norpchen, a former DRI researcher and a geography graduate student at the University, teamed with Albright and Peter Weisberg, professor in the College of Agriculture, Biotechnology and Natural Resources, to contribute to the exhibit. As ecologists and biogeographers, Weisberg and Albright helped identify plausible climate change, vegetation change, and fire scenarios for this region. Norpchen, an expert in computer visualization, created oversized photomaps and animations contrasting two diverging outcomes.

"The project uses satellite imagery, computer animations, and a series of narratives to help people get a tangible impression of a rather different future," Albright, who also runs the Laboratory for Conservation Biogeography, said. "But the work goes beyond this by highlighting one of many challenges climate change creates. As the pace of climate change is likely to be – and in some cases already is – very rapid, many of the normal pathways that ecosystems use to respond to variability may be overwhelmed."

The Harrisons present two contrasting visions: one in which "nature" is left to follow its course responding to warming, and another in which humans play a more active role in establishing new species in the area that are better adapted to the new conditions.

"We provided the expert knowledge," Weisberg said. "The Harrisons ran this through the filter of their artistic vision and then transferred the outcome to Derek, who used his amazing technical skills (and his own artistic vision) to construct animations which provided the video for the exhibition.

"The value of the work lies in raising the ecological consciousness of the public and provoking society to consider the future in a dramatically altered world, in a way that academic scientists are not easily able to achieve through technical publications and lectures."