LINKING ISLANDS IN THE DESERT
Restoring Springs on the Kane and Two Mile Ranches

CONSERVATION REQUIRES CONNECTION
The Colorado Plateau has more National Parks and Monuments than any other region of the United States. As the climate changes it will be the connections among these protected “islands” will be critical to sustain the wildlife that call them home. The Kane and Two Mile Ranches encompass 850,000 acres linking Grand Canyon National Park, Vermilion Cliffs National Monument, and Grand Staircase-Escalante National Monument. Keeping these islands connected is vital for conserving wildlife on the Colorado Plateau.

WATER IS LIFE
Springs, areas where groundwater emerges on Earth’s surface, are a key component of this semi-arid landscape. They provide important primary habitat for reptiles, amphibians, and birds. They also are important watering holes for pronghorn, mountain lion, coyotes, and bighorn sheep that serve to link habitats across the desert landscape. Unfortunately, many springs in the region have become invaded by non-native species such as tamarisk or giant reed grass. Springs have also been heavily modified to support local livestock operations.

Not only do springs link key habitats for large wildlife, they also provide a home for a variety of plants, reptiles and amphibians. These habitats are likely to be at risk as climate changes.
**LEARNING TO SHARE**

The Grand Canyon Trust is undertaking a pilot effort to develop new approaches for spring restoration, with support from the Wildlife Conservation Society's Climate Adaptation Program (established with support from the Doris Duke Charitable Foundation), and in partnership with the Arizona Game and Fish Department and the United States Fish and Wildlife Service. Our goal is to find ways to return these springs to a more functional state while still maintaining water for others who depend on it. Our hope is to demonstrate new ways for functioning springs to be compatible with ongoing livestock operations. The lessons we learn will help Colorado Plateau ranchers protect these vital systems and preserve the multitude of values that springs provide.

**PROJECT GOALS:**
- Remove non-native species
- Restore habitat structure
- Restore natural flow and pooling
- Eliminate livestock impacts at spring sources
- Develop new approaches to maintain water at springs while maintaining livestock operations

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Northern leopard frog (*Rana pipiens*; Left), Western rattlesnake (*Crotalus oreganus*; Center), and a helleborine orchid (Right) are just a few of the many species that call these special habitats home.

Once complete, this project should create more oases like these across Vermilion Cliffs National Monument.