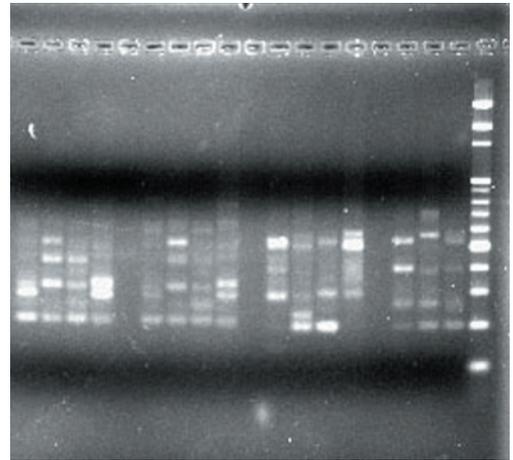


Conservation Genetics at the San Diego Field Station



Screening for polymorphic ISSR loci. Photographs by R. Contreras (top left, bottom right), C. Brown (top center), and J. Deas (top right), USGS.

Genetic and molecular studies have become powerful and essential tools for conservation biology and environmental monitoring. Genetic information can help conservation biologists determine populations of species in need of protection, identify source populations for reintroduction efforts, quantify biodiversity across a landscape, and monitor the effects of anthropogenic landscape change on population genetic structure and regional evolutionary potential.

Researchers at the San Diego Field Station of the USGS Western Ecological Research Center are using genetic techniques to investigate the population structure of several species of conservation concern and to reveal links between geographic and genetic patterns across southern California. Our partners and clients include the U.S. Fish and Wildlife Service, National Park Service, California Department of Parks and Recreation,

California Department of Fish and Game, and Arizona Department of Game and Fish.

In our laboratory, and with the San Diego State University Microchemical Core Facility, we routinely perform DNA extraction and isolation, Polymerase Chain Reaction (PCR) amplification, gel electrophoresis, and DNA sequencing and genotyping.



Accurate and timely identification of endangered and threatened fairy shrimp species will be possible with a rapid genetic test that can be used on their cysts during the dry season. This test is being developed by scientists of the USGS WERC San Diego Field Station, in collaboration with San Diego State University and University of San Diego. Photograph by D. Parsick, USD.

For more information:

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