

Curriculum Vitae

Timothy Paul Krantz
1601 Barton Road #1715
Redlands, Ca 92373
(909) 798-3705
krantz@institute.redlands.edu

Salton Sea Database Program
University of Redlands
Redlands, Ca 92373
(909) 335-5149

Education

Ph. D., Department of Geography, University of California at Berkley, 1994.
M.A., Latin American Studies, Stanford University. 1991.
B.A., University of Redlands, California. 1977.

Graduate Degree Theses

Ph.D. Dissertation: A Phytogeography of the San Bernardino Mountains, San Bernardino County, California. Committee: David Stoddart, Chair; Bernard Nietschmann; Robert Ornduff; Robert F. Thorne.

Master's Thesis: People and Parks: Conflict and Conservation in Central America. Committee: William Durham, Terry Karl and Kathleen Morrison.

Professional Experience

1997-Present. Assistant Professor of Environmental Studies, University of Redlands; primary teaching responsibilities include physical geography, biogeography, environmental impact assessment, wetland restoration, plant taxonomy, remote sensing, and environmental design studios.

1998-Present. Program Director for the Salton Sea Database Program (SSDP), a \$4.5 million federal grant assistance program. As Program Director for the SSDP, Dr. Krantz directed development of a state-of-the-technology GIS laboratory and operational database devoted to facilitation of research and dissemination of information regarding the Salton Sea restoration planning efforts. Primary programs and applications include compilation of a comprehensive bibliographic database, acquisition of digital elevation models (DEMs), digital raster graphics (DRGs), and remote-sensed images; baseline reconnaissance study coordination with the Salton Sea Science Office; facilitation of interagency resource management decision-making; and coordination with Mexican resource agencies concerning bi-national environmental decision-making. Dr. Krantz served on the Salton Sea Science Subcommittee, established in 1998 under the direction of the Secretary of Interior to coordinate research efforts on the Salton Sea; and serves today on the Salton Sea Science Advisory Committee—the only member who has continuously served on both committees.

1995-1997 Senior Associate Scientist, Levine-Fricke, Inc., an environmental engineering firm specializing in hazardous waste remediation and ecological restoration. Dr. Krantz developed and managed the Ecological Services Division for the nationwide firm. He managed several major restoration projects in the San Francisco Bay, including design, engineering and construction of a salt marsh on habitat previously used as salt evaporation ponds (Oro Loma Marsh) and a highly successful tidal marsh restoration project in conjunction with a court-ordered landfill rehabilitation effort (Arrowhead Marsh).

1979-1995 Environmental consultant, sole proprietor of Bio-Tech, an environmental analysis and planning consultant firm in Southern California, specializing in endangered species conflict resolution, mitigation and recovery programs.

1983-1988 Member and Vice Chairman of the San Bernardino County Planning Commission. Dr. Krantz's district covered the entire Mojave Desert portion of San Bernardino County, providing practical experience dealing with closed basin hydrology and land use issues along the Mojave River.

1986-1987 Senior Ecologist, Michael Brandman Associates, a major environmental services firm in Santa Ana, California.

Other Professional Experience

- Conducted more than 150 environmental impact assessments involving a wide range of projects, including species-specific endangered species investigations to coordination of multidisciplinary teams working on complex environmental impact studies and land use planning issues. Dr. Krantz has developed particular area expertise, including endangered species mitigation and conflict resolution; emergency response planning and hazardous waste remediation; mineral resource development and reclamation; and tidal marsh wetlands restoration and creation.
- As Planning Commissioner for San Bernardino County (the largest county in the United States at 57,000 km²), developed regulatory guidelines and ordinances governing soil erosion control, tree removal, forest/urban interface fire hazard management and agricultural land preservation; adopted one of the first resource-based community land use plans in California, incorporating biotic and cultural resources overlay districts in a geographic information system (GIS) with specific development standards for projects in sensitive areas.
- Founded the Big Bear Valley Preserve, a regional preserve system of The Nature Conservancy's California Critical Areas Program, involving 16 preserves under 6 different government jurisdictions. Assembly of the regional preserve system utilized fee title acquisitions, federal land exchanges, conservation easements, deed restrictions, voluntary landowner protection agreements and other land entitlement mechanisms.

International Project Experience

- Member of the UCMEXUS environmental assessment team investigating the Rancho Jabalí and Cuitzmala landholdings of Sir James Goldsmith in the States of Colima and Jalisco, México. A demonstration agroforestry project at Rancho Jabalí involved retention of native trees with coffee plantations in the understory.
- Member of an International Nature Conservancy expedition to the Reserva Faunística del Río Cuyabeno in Ecuador, an area of indigenous-controlled resource management adjacent to oil and gas exploration in the Upper Amazon.
- Conducted research on natural resources management and the relationship of surrounding human communities at Río Plátano, Honduras and La Amistad, Costa Rica-Panama- two UNESCO Biosphere Reserves.
- Conducted research on the invasive Central American tree, *Miconia calvescens*, which has taken over 70% of the island of Tahiti and is well-established on the adjacent island of Moorea, French Polynesia. Mapped the extent of the exotic tree using color-infrared image analysis techniques.
- Member of the planning team in the Riau Archipelago, Indonesia, mapping the plant communities of the five major islands using aerial photography image analysis techniques. Produced a land use and municipal watershed management program for the islands prior to their being opened up to settlement by an inter-island highway project.

Papers and Publications

- Krantz, T. and J. Buckles. 2002. *Reconstructing Holocene Lake Cahuilla using GPS and GIS*. Hydrobiologia: proceedings of the Science Symposium on the Salton Sea, Desert Hot Springs, Ca, January, 2000.
- Krantz, T. and R. Inman. 2001. *A Wildlife health event response system for the Salton Sea*. ESRI International User Conference 2001, San Diego, CA, July 2001.
- Krantz, T. 2000. *Water in the desert: restoring the Salton Sea*. American Water Resources Association (AWRA) Specialty Conference on Water Resources Management in Extreme Environments, Anchorage, AK, May, 2000.
- Krantz, T. and Tahni Brier-Johnson. 2000. *A wildlife health event response plan for the Salton Sea*. AWRA Annual Conference, Miami, FL, November, 2000.
- Krantz, T. and Carlos Valdes Casillas. 2000. *Bi-national collaboration for water resources management in the Imperial-Mexicali Valley*. AWRA Annual Conference, Miami, FL, November, 2000.
- Krantz, T. and Joseph Buckles. 2000. *Reconstruction of prehistoric shorelines for cultural resources using GIS*. ESRI International User Conference 2000, San Diego, CA, July 2000.

- Krantz. 1999. *The Salton Sea Database Program: an information clearinghouse to facilitate restoration planning on California's largest lake*. ESRI International User Conference 1999. San Diego, CA, July 1999.
- Krantz, T. in Faber, P., ed. 1997. California's Wild Gardens. California Native Plant Society Pub.
- Krantz, T. 1994. *A phytogeography of the San Bernardino Mountains, San Bernardino County, California*. Doctoral dissertation, Dept. of Geography, Univ. Calif. at Berkeley.
- Krantz, T. 1993. *A biogeography of the San Bernardino Mountains of Southern California*. Assoc. of Pacific Coast Geographers Annual Meeting, Sept. 15-18, 1993.