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# Proceedings of the **CALIFORNIA RIPARIAN SYSTEMS CONFERENCE**

**September 22-24, 1988  
Davis, California**

*Protection, Management, and  
Restoration for the 1990's*



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The nearly 100 papers in these proceedings are aimed at a diverse audience of resource managers, environmental consultants, researchers, landowners, environmental activists, and a variety of user groups. Some of the papers explain how streams interact with the plants and animals at their margins and with the land that they occupy to accomplish a range of important functions, including protecting the banks from erosion, reducing the impacts of flooding, providing wildlife habitat, protecting instream habitat for fishes, producing forage for livestock, and enhancing human lives. Biological diversity in western lands is often directly related to these corridors, which also serve as major routes for migratory birds. Special attention is given to the several threatened and endangered species which need riparian habitats and to the response of riparian systems to such disturbances as fire, logging, landslides and diversion for power or water supply. A concluding section deals with measures being taken to preserve and restore riparian lands, particularly along large rivers and in the cities. Special attention is given in some of these papers to revegetation techniques.

*Retrieval Terms:* riparian habitat, riparian systems, biological diversity, revegetation, stream diversion, threatened and endangered species, range management.

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## Foreword

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## *Protection, Management, and Restoration for the 1990's*

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## PREFACE

This volume presents the proceedings of the second large conference to be convened at the University of California, Davis, under the California Riparian Systems title. It is one of the many responses since the first expression of public concern in the mid-1970's over the catastrophic loss of these attractive and valuable streamside lands. By the time of the first big California riparian conference in 1981, the concern had already been picked up by the resource agencies, and they were represented in force at that meeting. But losses of riparian habitat have continued over the intervening years, even as we have learned the true value of these corridors in helping tame the forces at work within the rivers.

Central valley riparian forests have been reduced now to barely 1 percent of the original pre-Gold Rush acreage. In many cities and in some heavily grazed areas, the corridors scarcely exist at all. In the valleys these forests are casualties to agricultural and other economic development on the side that borders the uplands. On the side that faces the river they fall prey to limited-purpose water management programs, usually aimed at flood control and delivery of water.

The list of benefits from wise management of riparian lands is becoming familiar to people who attend these conferences. Though, as one resource manager put it, it takes a conference like this to remind us that the values are not just those related to the one resource that each of us happens to be concentrating on. The list of riparian values is not endless, but it is long and it includes these:

- Protects banks from erosion.
- Helps to reduce the impact of flooding.
- Provides quality living conditions for fish and wildlife.
- Creates corridors for their migration.
- Harbors a number of endangered species.
- Produces abundant fodder for cattle.
- Produces timber and other wood products.
- Provides recreation sites.
- Contributes to the natural beauty of an area.

This conference was convened so that resource managers, researchers, agency administrators, users of the resources, and environmentalists could examine those values, provide an update on their status and management for all who are concerned with this complex of resources, and seek integration of the effort to protect and enhance them.

This second big conference had three emphases: (1) improving understanding of the ways that river, channel, bank and living things normally work together as systems in the riparian zone, (2) providing an appreciation for the part that riparian systems play in sustaining populations of several threatened species, and (3) reporting the results of experiments in restoring and revegetating riparian systems.

A number of participants have pointed out that this was not actually the second California riparian conference. It was the fourth. David Gaines, who later pioneered the conservationists' effort at Mono Lake, led the way by organizing an initial

conference for about 70 participants in Chico in 1976. This was followed a year later by a similar conference in Davis, organized by Anne Sands. Entitled, "Riparian Forests in California: Their Ecology and Conservation," this memorable conference on the status of the Central Valley riparian forest drew 128 people. Offered in expanded form in 1981, the first "California Riparian Systems Conference" drew 711 people from an incredible array of interests and produced 1035 pages of proceedings—still in print, still in demand, and still heavily used. It is, in fact, occasionally used as a textbook.

The second California Riparian Systems Conference, which took place on September 22-24, 1988, demonstrated the continued growth of this concern, drawing nearly 900 participants. This was at a time when workshops, training sessions, and focused conferences on riparian habitats had become common. The smaller conferences appear to be serving the training and dissemination functions for a concern that is now well established. Often these smaller meetings have been aimed at specialists in limited fields, e.g., range management, forestry, hydropower or fisheries management. We perceived, therefore, that the big conference should be the place where ideas might be hatched and critiqued, controversies could be aired, and the work of integrating what many of us believe has become too scattered an effort would most definitely be undertaken.

The roster of speakers attests to the success the meeting had in drawing together diverse interests. In that list of more than 200 people, agencies loom largest. Surprisingly, consultants were almost as numerous. University contingents were surprisingly large, considering the fact that riparian concerns are largely peripheral to most academic imperatives. The citizens' organizations, resource-oriented private businesses and other user groups were less well represented in the speakers' list, though their presence was felt both in the discussions and in the support that some of them provided in financing the conference.

Another mark of the success of the conference is seen in the fact that few participants could agree on what was best about it. For some, a panel on progress in preserving riparian lands along the Sacramento River (which we were not able to reproduce here) was best. Others felt that a panel on integrating public and private interests came closest to meeting their needs. Others were especially satisfied with an evening discussion of ways to interest local communities in preserving stream environments (which also had to be omitted from these proceedings). There were many though who felt that the technical sessions offered the most.

It is for people who are likely to share this view that these proceedings are offered, for those are the parts of a conference that can best be reproduced in print. This has to be done, though, while recognizing the fact that the essence of a multifaceted conference like this is really in the spirit that it helps foster.

That spirit began with the people who first gave expression to the public concern for riparian lands through meetings like this. Some of the most significant of those people are no longer with us and it is to them that we dedicate this publication, hoping that it will help to continue the movement in a direction and at a pace that would have given them satisfaction.

Thus, we dedicate these proceedings to the memory of Richard E. (Rick) Warner, whose vision and devotion to the cause of riparian conservation live on in all of us, and to David Gaines, who started many of us on this journey, and to Mona Myatt, who caught that vision and helped see, through her company's contribution, that this effort could move ahead—even though she could not follow.

This conference was made possible by many people. The sponsors (contributors of \$3,000 or more) and co-sponsors (lesser amounts or in-kind contributions) represent a wide range of support and include interests that have often been in conflict. This kind of breadth was seen also in the Advisory Committee, which numbered more than 40 (Appendix), and drew much enthusiastic participation, despite the potential for difference that existed among them.

Special thanks are due the Executive Group from that committee: John Menke, JoAnne Sorenson, Ann Riley, Ron Schultze, and Jim Nelson, who contributed much time and were almost never, in the press of their many other duties, heard to say "no" to a request for help. John Stanley, John Rieger, Roland Risser, Deborah Shaw-Warner, Phil Meyer, Steve Chainey and Earle Cummings, were not in the Executive Group but contributed almost as much—always willingly.

The staff of University Extension, with Lynn Read, Audrey Fowler, and Mike McCoy at the top of a long list, helped enormously in preparing for the conference, as did numerous individuals at the Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, in Berkeley, in preparing the Proceedings for publication. Thanks go to 30 people who responded to our need to pass the papers through technical review on schedule that left most of us gasping. Their pleasant and uncomplaining help is gratefully acknowledged.

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Finally, special thanks go to my wife, Bonnie, who never once complained of my absence and near-total distraction during the months that led up to this conference.

**Dana L. Abell**  
University of California,  
Davis Technical Coordinator