

Foreword

The representation of exceptional scientists, broad range of papers, and quality of research presented at this symposium are truly remarkable, and they underscore the progress made since the 1980s, when publication of anything related to Hawaiian streams was difficult because interest at all levels was minimal, and only a few pioneering researchers were willing to commit time to the subject.

The establishment of the Water Code in Hawai'i and the formation of the Commission on Water Resource Management under the Department of Land and Natural Resources encouraged the Division of Aquatic Resources (DAR), which is assigned responsibility by Statute for the management and protection of all living aquatic resources in Hawai'i, to focus on expanding the information base to assist in regulatory decision-making and lend credence to the development of instream flow standards. Fortunately, an existing collaboration between Dr. Robert Nishimoto (DAR) and Dr. J. Michael Fitzsimons (Louisiana State University) provided the seed to develop the program.

The resultant 1990 Symposium on Freshwater Stream Biology and Fisheries Management, entitled *New Directions in Research, Management, and Conservation of Hawaiian Freshwater Stream Ecosystems*, represented the first effort to organize existing state-of-the-art knowledge and bring varied interests together. It led to development of a longer range plan which with the current symposium has effectively been accomplished with reference to its principal objectives. The mark of good science, however, is that the advance of knowledge inevitably leads to more questions. The discussions during this symposium have posed an important set of new questions.

Application of the advancing knowledge to management has been lagging for institutional reasons more related to organization and influencing decision-makers than to the quality of the science involved, but that is no excuse for stepping back from new investigations to advance the science. In fact, as the institutional deficits are reduced, the demand for good science will increase rapidly. Effective steps to move the management component ahead have in fact been recommended in this symposium.

We are nevertheless at a crossroad. If there is not regulatory commitment to rational management, there is danger that this symposium will become an end point with a good scientific record indicative of what can be accomplished but insufficiently valued by decision-makers to justify the expense of continuation. Or, it can set the stage for implementation of a more comprehensive stream protection and instream flow management program that will mandate continuing expansion of scientific knowledge.

There will always be strong pressure for an end, in part because decision-makers and the public-at-large have little intrinsic familiarity with the biota supported by freshwater streams. As human population expands and development interests become overwhelming, water running out to sea may again in the prevailing view be regarded as wasted. If, however, the intellectual power inherent in the participants in this symposium is retained through future cooperation and unification, the pessimistic outcome can be overcome.

As understanding expands, it will become easier to justify the value of these resources. That is why your participation in this symposium was so important. And if you maintain your commitment, the symposium will indeed mark a step forward rather than an end point.

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