

Institute for Applied Ecology

Richard Norris Lecture

How will river ecosystems weather global change? The scientific and social challenges in shaping a more resilient future.

Professor LeRoy Poff

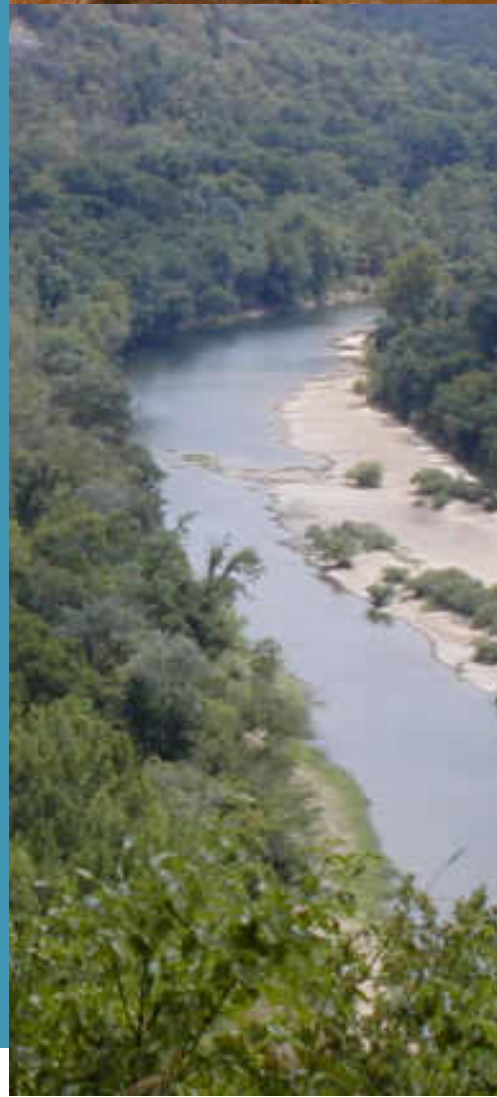
Department of Biology, Colorado State University

Humans are transforming flowing water ecosystems around the planet, causing rapid declines in aquatic biodiversity and ecosystem goods and services. Among the key drivers in this transformation are various forms of water infrastructure (dams, irrigation works) that fundamentally modify biophysical processes in aquatic and riparian systems. One major response to this degradation has been to restore some historical flow variability to dammed rivers through provisioning of 'environmental flows.' A foundation of this approach is to manage toward some historical reference condition; however, baseline conditions are rapidly changing with persistent human land use modification, with assisted spread of exotic species and now with rapid climate change. The social and scientific expectation of a future that deviates markedly from the past is fueling paradigm shifts in water resources and conservation management. What can (and should) conservation scientists do to help guide the evolution of a new management perspective that can promote ecosystem resilience and support biodiversity sustainability in the face of expanding water infrastructure, in both developed countries and in developing regions?

DATE: Wednesday 5 November

VENUE: Inspire Centre, Flexi Space

TIME: 4:00 pm - 5:00 pm
With canapes afterwards



Australian Government



MURRAY-DARLING
BASIN AUTHORITY



UNIVERSITY OF
CANBERRA



INSTITUTE FOR
APPLIED ECOLOGY



About Professor LeRoy Poff

Professor LeRoy Poff is a stream and river ecologist in the Department of Biology at Colorado State University, where he also is Director of the university-wide Graduate Degree Program in Ecology. His research aims to understand how natural and human-caused hydrologic variability regulates species interactions and shapes the structure and function in freshwater aquatic and riparian ecosystems. His hydro-ecological research and publications have contributed fundamentally to informing the applied science of 'environmental flows' and sustainable river management. He collaborates with biologists, hydrologists, geomorphologists, engineers and social scientists, and he currently has research projects on hydro-ecology and climate change in the US, Ecuador, and Australia. He is a former president of the Society for Freshwater Science, an ISI Highly Cited Researcher, and an elected Fellow of the American Association for the Advancement of Science.

