

Editorial note

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Invasion science lost a luminous pioneering figure on July 4, 2017—Lloyd Loope died in Hawaii at age 74 following a long illness. Even before earning a doctorate at Duke University in 1970 for research on montane vegetation in Nevada, he had worked at Grand Teton National Park in Wyoming, beginning a long association with the United States National Park Service (NPS). In 1973, he was assigned by the U.S. government to assist Spain in organizing its national park system, and from 1974 through 1976 he worked in Paris for the Man and the Biosphere Programme of the United Nations. Upon returning to the United States Loope worked at Everglades National Park, and in 1980 he became a research biologist at Haleakala National Park on Maui. Eventually his position was transferred to the U.S. Geological Survey, but he remained on Maui and continued a vigorous research program of invasive species and conservation even after his retirement in 2012. He was instrumental in founding the Maui Invasive Species Committee in 1999, an NGO that he chaired and that remains active today, surveying and working to control invasive species.

Loope's research encompassed a remarkable range of topics, virtually all related to conservation. Many

papers based on detailed, laboriously gathered field data were instrumental in establishing conservation-favorable policy. His early research on fire history and impacts on vegetation and wildlife in Wyoming moved Grand Teton National Park and Yellowstone National Park towards maintaining a more natural fire regime, and with colleagues he authored summary papers on effects of Hurricane Andrew in south Florida and the Florida Keys that pointed to long-term impacts, including the likely spread of invasive trees. His research on invasive plants, ants, pigs, rabbits, goats, rats, mice, and game birds in Hawaii constitutes one of the most complete inventories of regional invasion impacts ever assembled. Loope's biggest focus was on the impacts of invasions in the U.S. National Parks. With another NPS scientist, Susan Bratton, he was instrumental in shifting the National Park Service towards an aggressive policy of excluding and managing invasive species—in Loope's case, against some pushback from advocates for certain nonnative species in Hawaii.

Much of Loope's research consisted of studying interactions of biological invasions with other aspects of global change, such as global warming, land use modification, and changing fire regimes. He was one of the early leaders in calling attention to the importance and pervasiveness of such interactions, as well as to the phenomenon of invasion as a major global change in its own right. He was a key

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participant in the 1980s project of the Scientific Committee on Problems of the Environment (SCOPE) that precipitated the explosive growth of invasion science.

Although he published many papers in leading international journals and important books, Loope also published frequently on invasion issues in the NPS journal *Park Science* from its inception in 1980, thus sensitizing NPS personnel and enthusiasts throughout the United States to the depth and scope of invasion problems. His publications ranged from reports of

intensive empirical and observational research on specific systems through broadly ranging discussions of policy at the national and international levels. Loope continued working on research papers until just before his death, and one of his last contributions, with Thomas Stohlgren and Lori Makarick, is a summary of invasive plant status, impacts, management, and likely coming developments throughout the NPS. He will be missed by the international invasion science community as well as his many research and management partners in Hawaii, but he leaves an inspiring legacy.