William S. Cooper Award
Daniel Gavin, Linda Brubaker, and Kenneth Lertzman
University of Washington

The **William S. Cooper Award** is given by the Society in honor of one of the founders of modern plant ecology. It recognizes an outstanding recent contribution in geobotany, physiographic ecology, plant succession, or the distribution of organisms along environmental gradients.

The 2005 recipients are Drs. Daniel Gavin, Linda Brubaker, and Kenneth Lertzman for their paper, "Holocene fire history of a coastal temperate rain forest based on soil charcoal radiocarbon dates," published in *Ecology* in 2003. The paper developed from research done while Daniel Gavin, currently a Research Associate at the University of Vermont, was a graduate student in Linda Brubaker's laboratory at the University of Washington.

Determining the fire history of forest ecosystems is critical to understanding forest dynamics and forecasting ecosystem responses to ongoing and future climate change. Forest ecologists and paleoecologists have devised a number of clever ways to reconstruct fire histories, but they differ in their spatial and temporal resolution and applicability in particular systems. In their paper, Gavin, Brubaker, and Lertzman apply a novel combination of fire-scar analyses and radiocarbon dating of buried charcoal in soils toward reconstruction of fire history in southern British Columbia. Innovative statistical analyses of the charcoal and fire-scar data allowed them to develop an unusually detailed record of fire patterns among landform types. These records reveal evolving patterns of landscape-level fire patterns with Holocene climate change, going from extensive fires spanning multiple landforms in the dry early Holocene to a patchy late Holocene pattern of higher fire frequencies on south-facing slopes. The study sets new standards for paleoecological analyses of fire disturbance, and provides important baselines for scientifically sound management of forest ecosystems in coastal temperate rain forests.