



Sequoia & Kings Canyon National Parks

Sequoia & Kings Canyon National Parks Embrace Research to Expand Knowledge of Historic Fires

Core Samples Taken at Oriole Lake to Extract "Black Carbon"

Sequoia & Kings Canyon National Parks and University of Rhode Island, Graduate School of Oceanography have partnered in a research project in Sequoia National Park. Sediment core samples were collected from Oriole Lake this summer in an attempt to extract black carbon from the sediment. This black carbon may present valuable information about fire history in the area.



Scientists can determine when a fire occurred based on the presence of black carbon and other fire charred material. The dating of the fire is based on the location of the black carbon in the core sample.

Core samples taken at Oriole Lake in the summer of 2007.

The black carbon can be compared to the fire history of the surrounding landscape that has been reconstructed from tree rings (fire scarred trees) for the past 300 or so years. If there's a correlation, past patterns and changes in fire over a long period of time, up to several thousand years, may be observed.

This three-year project could provide the parks with valuable new data about historic fire regimes and patterns as well as information about the intensity and size of past fires. It will present a new tool to look further in the past in geological records beyond tree scars. A longer record could give a better estimate of how fire varied in the past relative to climate shifts.

"I am optimistic that the core samples at Oriole Lake will provide useful information as we start to think in more detail about future climate changes and how we need to manage fire and natural resources," Tony Caprio, Fire Ecologist for Sequoia & Kings Canyon National Parks said.

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