

RESEARCH ABSTRACT

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Study Title: Recovery of aquatic insect communities in streams near Mount St. Helens

Key Words: aquatic animal stream invertebrate insect
production blowdown zone archives

Abstract: We have monitored stream insect communities from 1980 to 1988 in Clearwater Creek, Elk Creek, and Ape Canyon. Quantitative and qualitative samples indicate rapid colonization in 1981-82, and then a gradual increase in richness and diversity. Over 200 taxa have now been collected from Ape or Clearwater Creeks.

The structure and productivity of the benthic community comparing Upper Clearwater Creek (affected by the blast and ashfall) with Elk Creek (ashfall only) for 1985 and 1986 was R. Meyerhoff's PhD thesis project.

Type of Measurement(s): Hess samples (.02 m) for quantitative benthos collections; kick-net collections and hand washing of wood debris for qualitative collections. Water temperature was monitored from 1985-87 at the Upper Clearwater Bridge with a Datapod.

Frequency of Measurement(s): In 1981 January, May, July, and October. In 1985 and 1986 10-12 times between March and October for Clearwater and Elk Creeks. In other years only in late August or early September.

Data Storage: Insects are stored in alcohol. Benthos data are on handwritten data sheets and some on floppy disks (DBASE III format). Temperature data on floppy disks (LOTUS 1-2-3).

Long-term plans: Data available for collaborative efforts: We hope to continue to be involved in the aquatic habitat recovery studies with J.R. Sedell of the USFS. Long-term monitoring of the aquatic insect community will require modest funding.

The Aquatic Entomology Lab at OSU has a large amount of material stored as baseline data. This includes some 1980 pre-eruption collections by the USGS. Funds are needed for identifying, labeling and curating the insects if these collections are to be of much use for other researchers.