

RESEARCH ABSTRACT

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Study Title: Spider biogeography at Mount St. Helens

Key Words: terrestrial animal invertebrate spiders wind dispersal
pyroclastic flows archives

Abstract: Spider populations on the pumice plain were sampled and compared to those at a control site on the south slope of Mount St. Helens that received only tephra from the May 1980 eruption. All living organisms were either swept away or buried by the eruption at the pumice plain study site; there were no survivors and vegetation was sparse at this location during the years of sampling. Sampling at the control site revealed no significant effects on the spider community. The number of individuals trapped at both sites was nearly the same, but many more species were trapped on the pumice plain than at the control site. The majority of species arriving on the pumice plain are wind dispersed. They appear to be coming from lowlands approximately twenty miles to the west, transported by prevailing winds through the corridor of the Toutle River Valley. Most spiders perish soon after their arrival, and as of 1985, spiders were not colonizing this location.

Type of Measurement(s): Collection methods: pitfall traps, barrier flight traps, fallout traps, hand collection, sweeping of vegetation. Species were sorted, individuals counted, samples weighed.

Frequency of Measurement(s): 1981-1987 traps generally checked every 2 weeks June-October.

Data Storage: Specimens at Burke Museum. Data on cards and floppy disks in LOTUS or Rod Crawford database management system in personal possession.

Long-term plans: Data available for collaborative efforts: Further study depends upon funding. Crawford is willing to collaborate with other investigators with funding. Specimens are available for loan to legitimate researchers.