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UM researchers study alpine lakes

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UM RESEARCHERS STUDY
ALPINE LAKES

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MISSOULA--

Mount St. Helens ash has had only slight effects on the productivity of algae in Glacier National Park's alpine lakes, according to Jack Stanford, director of the University of Montana Biological Station at Flathead Lake.

"We've found that the ash is probably less important than the sediments that are derived from the glacial flower--that which comes out from underneath the glaciers," Stanford said. "Apparently the glacial deposits are as fertile as the ash, if not more fertile."

Stanford's preliminary conclusion comes after months of field work at Upper Kintla, Cerulean, Gyrfalcon and Pocket Lakes in Glacier National Park. By periodically taking water and soil samples, evaluating the rate of algal growth in these and lab samples to given amounts of nutrients, especially phosphorous, Stanford has compared the algae grown with ash as a nutrient with algae that has grown without ash.

The research is part of a federally funded proposal to look at the impact of Mount St. Helens ashfall on the productivity of algae in lakes undisturbed by man. The study began in August 1981 and will conclude in

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February 1983. It is being done in accordance with objectives of the U.S. Park Service.

In addition to the ash study, Stanford's research has revealed scientifically unique characteristics that occur in the isolated alpine lakes.

Pure species of fish were discovered, of which very little is known scientifically. "Upper Kintla has only one fish in it--bull trout," he said. "This fish apparently has been isolated from the rest of the drainage for probably eight or nine thousand years--give or take three thousand--and it's genetically different from bull trout that are in the rest of the basin."

The inaccessibility of the alpine lakes, difficult terrain and an avalanche shute have created difficulties for Stanford and assistant researcher Bonnie Ellis during the project. Winter snows and ice have made t[illegible]y skiis and snowshoes slow. Gyrfalcon, a lake at the top of the Continental Divide, has been frozen every t[illegible]e Stanford has "bushwhacked" to it.

"Gyrfalcon will have an interesting set of critters in it," he said, "because it's probably always been fishless, and thus, you can get a lot of crustaceans and insects in there that would normally be cropped out by the fish."

The fish have a great influence on the plankton--microscopic plants and animals that float in the water--and on those organisms that live on the bottom of ponds and lakes, he said.

According to Stanford, the lakes have a tremendous diversity of aquatic insects which, when compared with the insects found in lower altitude lakes and mainstream rivers, may explain more about the thermal biology of insects.

"The more we find out about the lakes," Stanford added, "the more easily they can be managed for different things. They will be a valuable source of information because they are going to be sensitive to acid rain and any other environmental pollutants."

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