

G-18 June 1982

STREAM RESTORATION BY REMOVAL OF SEDIMENT (IDAHO)

Scott Grunder and Dr. Jack Griffith  
Department of Biology  
Idaho State University  
Pocatello, Idaho 83209  
(208)236-2116

and

Guy Bonnivier  
The Nature Conservancy Silver Creek Preserve  
Box 624  
Picabo, ID 83348  
(208)788-4683

Accumulated sediment was removed with a suction dredge from several short sections of a tributary of Silver Creek, Idaho, to assess the response of brook and rainbow trout, aquatic invertebrates, and aquatic vegetation. Sediment has accumulated to depths of 1.5m in this particular stream which could limit the amount of habitat suitable for trout and aquatic invertebrates. Winter conditions for trout in this stream appear to be particularly stressful as exhibited by an 80-87% reduction in total numbers of trout in November 1981 as opposed to October 1981 sampling. Aquatic invertebrate diversity and numbers are low, especially those organisms most valuable as prey items for trout.

By removing sediment, we sought to restore stream depth and create more suitable wintering conditions for trout, and also to increase invertebrate production in these experimental sections of stream. Throughout the summer and winter seasons of 1982, one experimental section consistently had greater numbers of trout present than in either of two control sections. There were also greater numbers of larger trout (>13cm) present in the experimental section as opposed to controls. Several trends in invertebrate species numbers have been found in a second experimental section. Most noticeable have been exceptional increases in Hydropsyche sp. and Helicopsyche borealis caddisflies, both of which are important food items for trout.

Monitoring will continue in 1983 to evaluate biotic responses and the rate of redeposition of sediment following spring runoff.

Sent to Restoration & Mgt  
Notes

24 Feb 83