

ABSTRACT

Because stream fisheries are so closely associated with forested watersheds, it is necessary that the streams and forests be managed jointly under a system of multiple use. This requires a knowledge of the interrelationships between these resources to yield maximum returns from both. It is the purpose of this paper to relate logging practices to fish management by ascertaining the effect of logging-road construction on the drop of insects into a stream.

On the South Fork of Caspar Creek the insects falling into the stream were greatly increased after a logging road was built. A twofold increase in number and weight of insects occurred over the entire stream. In "Disturbed" areas, where the road paralleled the stream, drop insects increased three and one half times by number and one and one half times by weight over the "Insect-Control" area. In the "Highly Disturbed" areas, where the road crossed the stream, insect numbers increased by five and one half times and a threefold increase by weight over the "Insect-Control" area was noted.

A more than proportionate amount of the increase occurred in those adult insects having aquatic immature stages. One such family, Chironomidae, had a greater occurrence after road construction than all insects combined before construction. This family showed the most significant change of the families studied.