Streams and their biota are inherently linked to riparian vegetation: when we alter streamside vegetation we are altering streams. In the Pacific Northwest of the United States, riparian forests have undergone a drastic shift in the past half century, from decades of heavy harvesting to our current state of dense second-growth vegetation as a result of contemporary forest management practices. With dense vegetation comes a reduction in light availability to the streams on the forest floor. Primary production can become light limited and higher trophic levels are limited by basal resource availability. Earlier research has shown that relieving light limitation by removing large swathes of riparian forest can result in an increase in stream primary productivity, but clear cutting along streams is no longer a major concern in the Pacific Northwest. Instead we should be focusing on the effects of small, local changes in canopy structure and light availability that more accurately reflect disturbance patterns under current forest management practices.

Clear cuts have a definite impact on streams, but local changes in light availability (on the meter scale) are much more variable. Understanding the impacts of small canopy gaps, rather than large clear cuts, will be important for dictating future management practices.

Stream light availability is an important factor influencing aquatic food webs. In forested headwaters, stream algal production is highly light-limited, and an increase in light often enhances benthic algal growth, which in turn increases food availability for primary consumers in the stream. In headwater streams, light availability is mediated almost entirely by the canopy structure of stream-side vegetation.

Streams and their biota are sensitive to changes in riparian vegetation, particularly when it comes to light inputs (citation). When streamside vegetation is altered so too are the streams (When we alter streamside vegetation we are altering the streams) In headwater streams, light availability is mediated almost entirely by the canopy structure of stream-side vegetation.

Over the last century, many riparian forests in the Pacific Northwest were heavily harvested, leaving dense second-growth vegetation for the time being. Under current conditions we would expect dense closed canopies, little primary production, and a low abundance of invertebrates that feed on stream algae