

Light Gap Forest

When an individual or large clumps of trees are removed from a forest, a hole is formed in the forest canopy. Trees may be removed due to harvesting, or because they are damaged by wildfire or diseases, or succumb to old age. The resulting hole in the canopy is known as a 'light gap' because more direct sunlight reaches the forest floor in contrast to the usual one to five percent under full canopy conditions. This canopy alteration causes changes in the quantity and distribution of light passing through the canopy and reaching the forest floor. Light quantities available for a tree within or underneath a canopy depend upon the quantities above the vegetation and the light intercepted by leaves and branches of trees, lianas, and epiphytes in that canopy. Branches growing into gaps were significantly longer than those growing away from gaps, and are likely to lead to gap shrinkage and reduction in light within gaps. However, height growth of edge trees was not significantly different from that of trees within the surrounding stands. Light directly affects plants in several ways. Most importantly through the process of photosynthesis when plants convert light energy into chemical energy. This provides the plants with energy and indirectly provides other organisms with energy in the form of food.

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