Do Strip Bark Conifers Reflect $C0_2$ Fertilization in the 20th Century? [MAS]

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I propose to investigate the potential for $C0_2$ fertilization of high elevation conifers in the Tobacco Root Mountains. At upper tree-line, it has been traditionally thought that tree growth is governed by growing season temperature. However, in the past several decades new research evidence has demonstrated unprecedented growth rates in upper tree line forest that have been ascribed to enhanced $C0_2$ fertilization. Strip bark trees in particular show this accelerated growth rate. Trees with the strip bark morphology are characterized by their

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partial cambial dieback, which may be directly related to their rapid growth rates. There remains a controversy pertaining to the geographical extent of this phenomenon and its phy iological interpretation. The objectives of my research were to: Determine if white bark pine trees at upper tree line in the Tobacco Root Mountains exhibit anomalous growth rates during the 20th century. Assess the evidence for $C0_2$ fertilization as a cause of differential growth rates. My results will speak to the issue of whether increased atmospheric $C0_2$ concentrations during the 20th century has significantly altered tree growth, and thus serves a one of the first indications of the impacts of global change on terrestrial ecosystems.