

Implementation of Emerging Technologies: Forestry

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INSECT POPULATIONS AND COMMUNITIES influence, and perhaps regulate, ecosystem processes that affect forest landscape structure, function, and rate of change (Coulson and Crossley 1987). Traditionally, forest management has included a protection component that encompassed consideration of the impact of insects, diseases, and fire on resource values, i.e., timber production, fish and wildlife, recreation, hydrology, and grazing. Insects are of concern to foresters when their populations reach epizootic levels and negatively impact the resource values (Coulson and Witter 1984). Much of the research in forest entomology has dealt with seeking explanations for the causes of insect outbreaks and ways and means for suppression or prevention of them. The relation of forest management practices and insect population dynamics has been a common theme. The contemporary research agenda must also contend with issues associated with natural and cultural disturbances, atmospheric deposition, global climate change, loss of biological diversity, and sustained natural resource production. Given these circumstances, management of forest

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