

The Balsam Woolly Adelgid and the Fate of the Fraser Fir

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**Abstract:**

The Fraser fir has suffered dramatically ever since an invasive insect called the balsam woolly adelgid was introduced. There was a high rate of mortality across the Southern Appalachians. Michael Jenkins conducted a study on the summit of Mount LeConte in Tennessee in 1979 and 2001 to compare the basal area and density of Fraser fir within a 22 year period. From the data that were collected, there was a noticeable change in numbers among the dead and living Fraser fir stems. In 1982, Harold Adams and Steven Stephenson performed research to observe the impact that the balsam woolly adelgid has on Fraser fir on Mount Rogers in Virginia. Data analysis and comparison of the diversity indices seemed to show that Fraser fir will have a better chance of survival rate if the community it is in is more diverse. The results from these studies led to the conclusion that Fraser fir's survival rate is slim but it is not to extinction yet. The rate of regeneration is still balancing with mortality at this time.