

RECOVERY OF KOA TREES DEFOLIATED BY THE KOA MOTH,
SCOTORYTHRA PALUDICOLA (LEPIDOPTERA: GEOMETRIDAE)*

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In the last 80 years, four major epidemics of the Koa moth, Scotorythra paludicola (Butler), have occurred in Acacia koa stands on the island of Maui. The most recent infestation in 1977 involved 19,000 acres on the Makawao Forest Reserve. Several silvicultural management techniques had an influence upon the koa trees' response to complete defoliations. Foliage production in the upper crown as related to the diameter at breast height was unaffected by application of fertilizer, or a combination of fertilizer and thinning, whereas, the refoiliation in thinned stands was significantly lower than natural stands. Data from the experimental plots indicated that location had a greater influence upon refoiliation of the lower crown of the tree than fertilizer application or stand density.