

A STATE-WIDE ASSESSMENT OF THE ABUNDANCE AND DISTRIBUTION OF THE PEACH BARK BEETLE, *PHLOEOTRIBUS LIMINARIS* (COLEOPTERA: SCOLYTIDAE): A POTENTIAL THREAT TO BLACK CHERRY

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A survey was designed to assess the relative abundance and distribution of the peach bark beetle (PBB), *Phloeotribus liminaris*, across 100 northern hardwood stands in New York state in 2002 and 2003. A second study determined the within-tree distribution of overwintering PBB and relationships between density of external gum spots, number of overwintering galleries and number of emerging PBBs in order to develop a method for predicting PBB population density and trend. A third study assessed the crowns of black cherry as a potential source of brood material when black cherry slash is not available. A fourth study was initiated in 2004 that eventually will serve as the basis of recommending a time of year when cherry can be harvested and minimize the likelihood of a buildup in PBB populations.

PBB was distributed in every county surveyed in New York. Abundance was associated with the presence of recently created black cherry slash and increasing black cherry basal area. The Tug Hill and Catskill regions had the highest frequency of PBB. Overwintering beetles, though present throughout the tree bole, were concentrated on the lower half of a black cherry stem. There was a positive linear relationship between number of gum spots and number of overwintering galleries, but gum spot density and number of captured adult peach bark beetles were not related. The possible mechanisms driving the abundance and distribution of peach bark beetle at regional, stand and site scales are discussed.