

Nantucket Pine Tip Moth

Rhyacionia frustrana (Comstock)

Lepidoptera: Tortricidae

Gargiullo, P. M.; Berisford, C. W. 1981. Sampling for pine tip moths—a procedural guide. Res. Bull. 272. Athens: *The University of Georgia*; 25 p.

Objective: To determine the mean number of immature *R. frustrana* per shoot, per tree, and per unit area for developing life tables and absolute population estimates.

Abstract: The Nantucket pine tip moth, *Rhyacionia frustrana* (Comstock), is an important pest of Christmas tree and pine plantations in the eastern USA. Larval feeding can cause shoot mortality and tree deformity, height and volume reductions, formation of compression wood, and occasional tree mortality. Damage is most severe on seedlings and saplings less than 5-years-old. This paper discusses field sampling procedures and the use of a FORTRAN program to provide estimates of the mean number of immatures per shoot, per tree, and per area (e.g., per ha), with respective variances.

Sampling Procedure: The sampling procedure is described clearly in Gargiullo and others (1983). Once the data is collected, a FORTRAN program can be used to compute estimates of population size. Refer to Appendix B for the FORTRAN coding.

Note: Do not confuse the larvae of *R. frustrana* with those of *R. rigidana*. The relative position of the three prespiracular setae are used to differentiate these two insects (Miller and Wilson 1964).

References:

*Gargiullo, P. M.; Berisford, C. W.; Pienarr, L. V. 1983. Two-stage cluster sampling for pine tip moths. *Environmental Entomology* 12: 81-90.

Miller, W. E.; Wilson, L. F. 1964. Composition and diagnosis of pine tip moth infestations in the southeast. *Journal of Economic Entomology* 57: 722-726.