

## Pitch Pine Tip Moth

*Rhyacionia rigidana* (Fernald)

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 density of immature *R. rigidana* in order to develop life tables and absolute population estimates.

**Abstract:** The pitch pine tip moth, *Rhyacionia rigidana* (Fernald), is a common associate of the more abundant Nantucket pine tip moth, *Rhyacionia frustrana* (Comstock), and often shares the same host. Both species are important regeneration pests of pine plantations in the eastern USA. This paper discusses field sampling procedures and the use of a FORTRAN program to provide estimates of the mean number of immatures per shoot, tree, and unit area (e.g., per ha) with known levels of precision.

**Sampling Procedure:** The basic sampling procedure is described clearly in our review of Gargiullo and others 1983. Once the data has been collected appropriately, 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. rigidana* with those of *R. frustrana*. The relative positions of the three prespiracular setae are used to distinguish between the two species (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.