

## A NEW TECHNIQUE FOR COATING INSECT TRAPS

by Lawrence B. Helburg

Efforts to control the spread of Dutch elm disease by reducing the population of the major vector, *Scolytus multistriatus* (Marsham), have prompted use of sex pheromone baited traps (1,2,3). The concept is to trap sufficient quantities of beetles to effectively reduce the population, thereby reducing incidence of the disease.

Current popular trapping devices consist of a backing made of paper, wire-mesh, wood or other support material that is covered with a thin layer of sticky substance (1). An economical technique was developed to minimize complexity and messiness of preparing such traps.

A Lincoln hand-operated, high-pressure grease pump, model 1292, was utilized to transfer "Stickem Special®" from the standard 25 pound refinery can to plastic coated paper backing (Fig.

1 and 2). A spreader-head was designed to spread the stickem in a thin coat over the paper's surface and was fabricated of thin gauge sheet metal as illustrated in Fig. 3.

The Stickem was heated on a Coleman camp stove until, when stirred, it had the consistency of heavy molasses, that is, just before it became a clear liquid. Stirring was necessary to eliminate veins of stickem that were too cool. The resultant consistency allowed easy operation of the pumping system and facilitated uniform spreading.

When a sheet was coated, a second uncoated sheet was placed on top. When the two sheets were later separated, both sheets retained an adequate coating of stickem.

Using this technique a three-man crew prepared 4,600 24" X 18" traps in four eight-hour days.

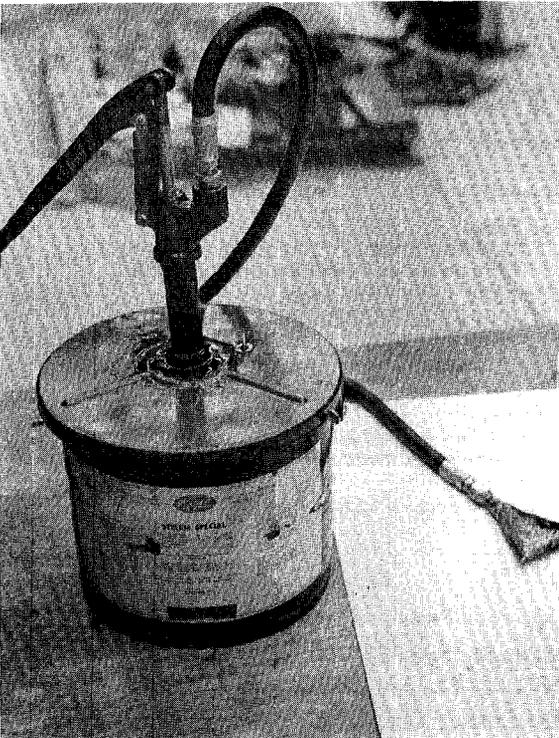


Fig. 1. Pump assembly used to coat traps with Stickem Special®.

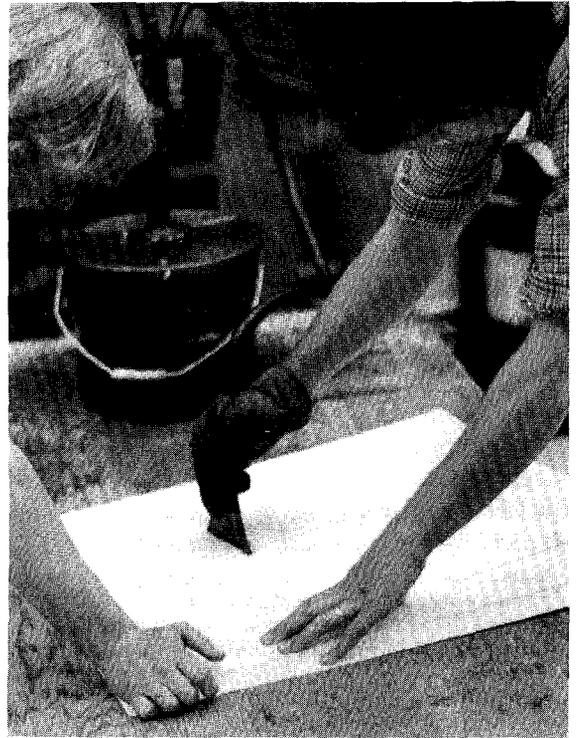
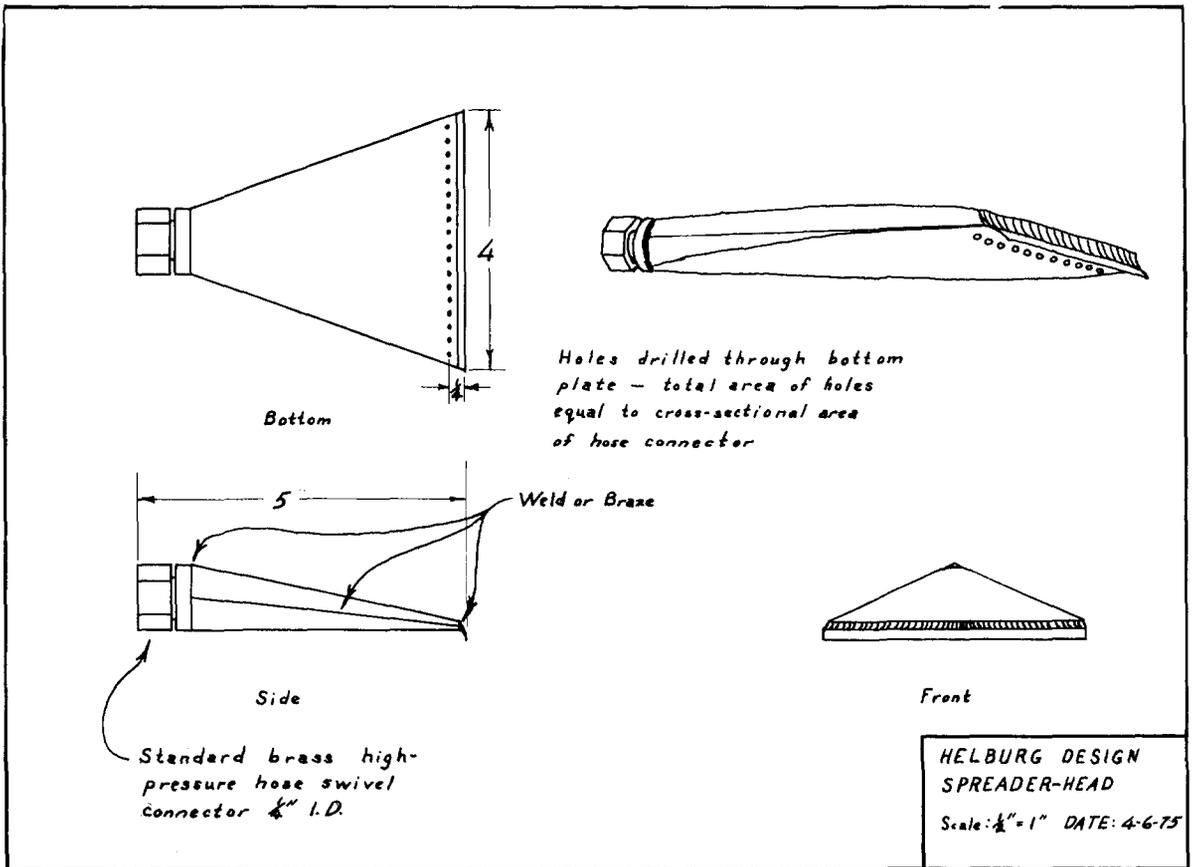


Fig. 2. Technique used to spread a thin layer of Stickem on the paper backing.



The apparatus was field-tested to determine the feasibility of recoating (or coating) traps as they hung in place. With twelve feet of high-pressure hose, traps were recoated as they hung seven to ten feet high in trees. It was found that on warmer days (+80°F), the stickem flowed readily, and recoating could easily be accomplished. However, on the cooler days the stickem had a tendency to cool very readily in the twelve-foot hose; thereby making application more difficult. The pumping system can be attached to a wheelcart, making the entire system very mobile.

**Author's Note:** Brand names mentioned here are for the reader's convenience and do not necessarily constitute an endorsement by the author or Colorado State University.

**Acknowledgment:** The author would like to acknowledge John G. Laut, Staff Forester, David A. Leatherman, Assistant Staff Forester, and Michael E. Schomaker, Insect and Disease Specialist, for assistance in development of this technique.

#### Literature Cited

1. Cuthbert, R.A. and John W. Peacock. 1975. Attraction of *Scolytus multistriatus* to pheromone baited traps at different heights. *Environ. Ent.* 4(6): 889-890.
2. Peacock, J.W., A.C. Lincoln, J.B. Simeone, and R.M. Silverstein. 1971. Attraction of *Scolytus multistriatus* (Coleoptera: Scolytidae) to a virgin-female-produced pheromone in the field. *Ann. Entomol. Soc. Am.* 64: 1143-9.
3. Pearce, G.T., W.E. Gore, R.M. Silverstein, J.W. Peacock, R.A. Cuthbert, G.N. Lanier, and J.B. Simeone. 1975. Chemical attractants for the smaller European elm bark beetle, *Scolytus multistriatus* (Coleoptera: Scolytidae). *J. Chem. Ecol.* 1: 115-124.

*Insect and Disease Division  
Colorado State Forest Service  
Colorado State University  
Fort Collins, Colorado*