

Bruce Spanworm

Operophtera bruceata (Hulst)

Lepidoptera: Geometridae

Herbert, C.; St-Antoine, L. 1998. The oviposition trap: a new technique for sampling eggs of the bruce spanworm and similar species. Res. Notes 5. *Canadian Forest Service, Laurentian Forestry Centre*; 4 p.

Objective: To develop a useful and efficient sampling method for *O. bruceata*.

Abstract: The bruce spanworm, *Operophtera bruceata* (Hulst), is a major defoliator of maple, *Acer* spp., and aspen, *Populus* spp., stands throughout Canada. Previous sampling methods included the use of sticky bands to sample the wingless female, but they were costly and laborious to maintain. A new egg sampling method that uses an oviposition trap has been developed. The trap, constructed from a piece of black ABS pipe, is placed in the ground and a styrofoam band and lid are attached to facilitate egg laying by *O. bruceata*. The styrofoam band is later removed and then returned to the laboratory for egg counts.

Sampling Procedure: Cut a piece of black ABS pipe, 10 cm in diameter and 1.2 m long, and draw a line 30 cm from one end. This line will later indicate the depth the pipe should be driven into the ground. Obtain a 6 mm-thick band of Styrofoam 10 by 36 cm, and connect the ends to make an opened cylinder using 5-cm wide masking tape. Obtain a black cover with a hole drilled in the center for the pipe and a Multi-Pher® trap lid (Jobin and Coulombe 1988) or similar lid (26.5 cm in diameter). The two lids are attached together with a bolt and butterfly nut. The Multi-Pher® lid provides a shelter for female insects and protects the styrofoam from weathering. Use a wooden mallet and drive the pipe into the ground. Install the styrofoam band onto the mounted ABS pipe cover. Install the entire assembly on the post making sure that the styrofoam band is supported along the entire periphery of the lid. The masking tape seam should face a northern aspect.

Eggs are recovered by removing the styrofoam band and returning them to the laboratory for tally.

Note: For more information contact Dr. Christian Hebert, *Canadian Forest Service, Laurentian Forestry Centre*, 1055 du PEPS, PO Box 3800, Sainte-Foy, Quebec G1V 4C7.

Reference:

Jobin, L. J.; Coulombe, C. 1988. The Multi-Pher® insect trap. Inf. Leaflet LFC-24E. Saint-Foy, PQ: *Canadian Forest Service, Quebec Region*; 8 p.