

COMMERCIALLY AVAILABLE TRAPS AND LURES FOR DETECTING NUN MOTH, *LYMANTRIA MONACHA* L., IN NORTH AMERICA

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Abstract

Studies were conducted to identify commercially available traps and lures that were suitable for use in detecting incipient populations of nun moth, *Lymantria monacha* L. Volatile components of the various lure formulations included only (+)-disparlure [(7R, 8S)-cis-7,8-epoxy-2-methyloctadecane], only (±)-disparlure, or a 20:20:1 blend of (±)-disparlure, (±)-monachalure [cis-7,8-epoxy-octadecane], and 2-methyl-Z7-octadecene. Tests were run in several locations throughout the range of *L. monacha*, including Japan, Korea, the Russian Far East, Poland, and Germany. In both Europe and Asia, capture of male *L. monacha* in traps with 410 µg of the 20:20:1 blend, formulated in a polyurethane tube (Phero Tech), was comparable to or somewhat greater than capture in traps with 500 µg of (±)-disparlure in a plastic

laminate formulation (Hercon); Phero Tech lures that were formulated with 41 µg of the 20:20:1 blend or (in Asia only) Hercon lures with 500 µg of (+)-disparlure attracted significantly fewer *L. monacha*. In addition, traps baited with the 20:20:1 blend caught far fewer gypsy moths, *L. dispar* L., when compared to traps with any of the disparlure-only baits. Standard delta traps appeared suitable for use on *L. monacha*, although slight modifications to standard methods (for gypsy moth survey) of trap folding and hanging improved catch. Relative numbers of male *L. monacha* captured in Europe and Asia by the various commercial lures differed from predictions based on results of earlier studies, suggesting that the chemical ecology of adult *L. monacha* is still not fully understood.