





# Technical Bulletin for: Winter Moth

*Operopthera brumata* (Linnaeus) • Lepidoptera, *Geometridae* • OPEBRU



<b>DISTRIBUTION</b>	Europe and the Near East. Invasive in North America
<b>HOSTS</b>	Prefer Oak and Apple, but also feed on Maple, Birch, Hornbeam, Chestnut, Hazel, Quince, Beech, Larch, Poplar, Cherry, Pear, Rose, Raspberry, Blueberry, Willow, Elm, and other leafy trees and shrubs.
<b>DESCRIPTION</b>	
<b>Adult Moth</b>	The forewing ground color of the winged males varies from grey-yellow to beige-brown or occasionally slightly reddish-tinted. The patterns are often band-shaped dark brownish, often indistinct. The fringe is yellowish. The hindwings are pale grey or yellow grey. Females are brownish-grey with rudimentary wing stubs. Length peaks at about 10 mm.
<b>Larvae</b>	Initially 2.5 mm, growing to 20 mm over a six-week period. Greenish in color throughout
<b>Eggs</b>	
<b>LIFE HISTORY</b>	It is one of very few lepidopterans of temperate regions in which adults are active in late fall and early winter. The adults use endothermy for movement in these cold temperatures. The female of this species is virtually wingless and cannot fly, but the male is fully winged and flies strongly. After the initial frosts of late fall, the females emerge from their pupa, walk to and up trees, there emitting pheromones in the evening to attract males. Fertilized, she ascends to lay, on average, around 100 eggs. Typically, the larger the female moth is the more eggs she lays. Recently hatched larvae feed on expanding leaf buds, often after having burrowed inside the bud, and later on foliage, for approximately six weeks. Pupation occurs in the soil in late May. Adults emerge from the soil in late fall to early winter, when, upon mating, the flightless female lays eggs in bark crevices and on branches.

## MONITORING INFORMATION

<b>LURE ACTIVE INGREDIENTS, SUBSTRATE &amp; FIELD LIFE</b>	Z,Z,Z-1,3,6,9-Nonadecatetraene in a Red Rubber Septum. Lure Longevity: Thirty (30) days.	
<b>TRAP TO USE</b>	Red Paper or Plastic Delta Trap	
<b>MONITORING STRATEGY</b>	Hang traps near host plants, at least 1 m off of the ground. When trapping for multiple species of insect, a spacing of up to 20m is recommended. Check with Cooperative Extension or Master Gardener for local information and recommendations.	
<b>CULTURAL &amp; PHYSICAL CONTROL</b>	Inspect for damage to crops. Remove infested branches as necessary. In extreme cases, removal of entire host plant may be required.	

**Alpha Scents, Inc.**  
insect monitoring systems

Alpha Scents, Inc., 360 S. Sequoia Pkwy. Canby, OR 97013  
TEL: 503-342-8611 • FAX: 314-271-7297 • sales@alphascents.com • www.alphascents.com