

Biology/Phenology

Seasonal Phenology of *Lacanobia* Fruitworm in Apple Orchards

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Intensive field observations of *Lacanobia subjuncta* were conducted to provide support for the development of a predictive degree-day model. Seasonal phenology was determined by sampling from several commercial orchard sites in the Columbia Basin and Yakima Valley.

Detailed description of the male and female moth activity was the primary focus of this study. Adult moth flights and mating status of females were assessed using three different trapping methods: pheromone, food-bait, and blacklight traps. Females were removed from the blacklight and food-bait traps and dissected to evaluate mating status.

Season-long sampling for *lacanobia* fruitworm moths indicated two major periods of flight. The first flight occurred from early May through early July, with peak moth activity in early June. The second flight began near the first of August and continued through September. All three trapping methods provided essentially the same pattern of adult flight in each generation. The sex ratio was close to 50:50 in the non-pheromone trapping systems. The development of a predictive degree-day model is confounded by a long pre-oviposition period and a difficulty in locating newly deposited egg masses. Ovarian development was classified by dissecting females moths removed from blacklight and food-bait traps. Ovarian development was categorized from unmated females to senescent mated females (eggs laid). These data will aid in predicting oviposition and provide important support for the development of a predictive degree-day model.