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# Hibernation of the Plum Curculio and Its Spring Migration to Host Trees

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## Abstract

Winter mortality in the plum curculio, *Conotrachelus nenuphar* (Herbst), varied from 23 to 9%, based on studies extending over a 6-year period

(winters 1954-55 through 1962-63). In 4 years there were no survivors of a southern strain exposed to winter conditions at Geneva, N. Y. Among beetles held in outdoor hibernation cages, only 4% entered the soil to hibernate; the others hibernated between leaf cover and the soil. There was slightly more winter mortality of males than of females. Females differed greatly in the exposure to low temperature required to terminate diapause. Males emerged from hibernation earlier than females and also appeared in host trees earlier. Over a 5-year period, from 33 to 62% of total emergence from hibernation occurred on a single day. Temperature does not appear to be the sole factor accounting for mass emergence. Several weeks pass between emergence from hibernation and appearance in host trees. Early in the season, males predominate among beetles collected in host trees. As the season progresses, the females become predominant. About 40% of the beetles captured in the course of the season were males. The low percentage of beetles which can be collected on a single day under optimum conditions suggests that the beetles do not occupy host trees continuously.

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