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ATTRACTION OF *PEDILUS LUGUBRIS* (COLEOPTERA: PYROCHROIDAE) TO *EPICAUTA MURINA* AND *EPICAUTA FABRICII* (COLEOPTERA: MELOIDAE) AND NEW FOOD PLANT RECORDS FOR *EPICAUTA* SPP.Andrew H. Williams¹ and Daniel K. Young¹

ABSTRACT

Pedilus lugubris was found associated with *Epicauta murina* feeding on *Lathyrus venosus* foliage and with *E. fabricii* feeding on *Lupinus perennis* flowers. *Epicauta cinerea* and *E. funebris* were found feeding on foliage of *Anemone canadensis* and *Physalis heterophylla*, respectively. This is the first reported association of *P. lugubris* with any species of *Epicauta*, and the first reported use of *Lathyrus venosus* by *E. murina*, of *Lupinus perennis* by *E. fabricii*, of *Anemone canadensis* by *E. cinerea* and of *Physalis heterophylla* by *E. funebris*.

Many *Epicauta cinerea* (Forster) were found feeding on the leaves of *Anemone canadensis* in moist prairie vegetation on the afternoon of 22 July 1997, in Richland County, Wisconsin. These included both the margined and cinereous forms; series of four of each form were collected. Many *Epicauta funebris* Horn were found feeding and mating on the leaves of *Physalis heterophylla* in prairie vegetation on the afternoon of 9 August 1997, in Columbia County, Wisconsin, and three were collected.

Twenty *Epicauta murina* (LeConte) were found feeding and mating on the youngest leaves of *Lathyrus venosus* in prairie vegetation on the afternoon of 6 June 1997, in Dunn County, Wisconsin. Several *Pedilus lugubris* (Say) were very close to them. Five *E. murina* were collected by grasping them with fingers and pushing them into vials containing ethanol, wetting the fingers in the process. Shortly thereafter, two *P. lugubris* landed on the dried hand and one of these chewed the tip of a finger; these were collected, with four others.

Several *Epicauta fabricii* (LeConte) were found feeding on flowers of *Lupinus perennis* in prairie vegetation late in the morning of 11 June 1997, in Portage County, Wisconsin, and four were collected. Though *Lathyrus venosus* was also present, *E. fabricii* was seen only on *Lupinus perennis*. A single *P. lugubris* was present and was collected.

In neither case was *P. lugubris* seen to touch an *Epicauta*. Specimens are deposited in the Insect Research Collection at the University of Wisconsin-Madison.

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DISCUSSION

Like all other studied species of Meloidae, those in *Epicauta* produce cantharidin, which attracts various other fauna (Young 1984). Several species of *Pedilus* have been observed in association with *Meloe* spp. (see Young 1984), including *P. lugubris* with *Meloe angusticollis* Say (LeSage and Bousquet 1983, Butler 1984 (as *P. collaris* (Say), see Young 1981)). *Pedilus labiatus* (Say) has been reported near caged *E. fabricii* (Abdullah 1964). Observations reported here are the first for *P. lugubris* associated with any *Epicauta* species, the first for any species that is attracted to cantharidin being attracted to *E. murina*, and of a second species of *Pedilus* being attracted to *E. fabricii*, presumably via cantharidin.

Adults of both *E. murina* and *E. fabricii* favor food plants in Fabaceae (Werner 1945). *Epicauta murina* has been reported to feed on alfalfa, *Convolvulus arvensis*, flax, legumes, *Melilotus officinalis*, potato plants, radish leaves and sugar beet (Carruth 1931, Werner 1945, Kirk and Balsbaugh 1975, Arnold 1976). *Epicauta fabricii* has been reported to feed on flowers, foliage, or both of alfalfa, *Amorpha canescens* (flowers), *Astragalus*, *Baptisia leucantha*, *B. tinctoria*, beans, *Caragana* (Siberian pea), clover, cowpeas, honey locust, Kentucky coffee tree, lupines, *Melilotus alba*, *M. officinalis*, peas, *Robinia pseudo-acacia* and soybeans in Fabaceae, as well as on anemones, chrysanthemums, ironweed, potato, sugar beet, sweet potato, and tomato in other families (Harris 1841, Claypole 1881, Wickham 1896, Chittenden 1898, Blatchley 1910, Robertson 1928, Carruth 1931, Gilbertson and Horsfall 1940, Horsfall 1943, Werner 1945, Werner et al. 1966, Kirk and Balsbaugh 1975, Arnold 1976, Blodgett and Higgins 1988). There are several reports of *E. fabricii* damaging potato vines (Harris 1841, Wickham 1896, Blatchley 1910, Gilbertson and Horsfall 1940, Horsfall 1943, Kirk and Balsbaugh 1975), but these reports of other non-leguminous food plants (Chittenden 1898, Blatchley 1910, Kirk and Balsbaugh 1975) may warrant confirmation. This is the first report of *E. murina* feeding on *Lathyrus venosus* foliage and of *E. fabricii* feeding on *Lupinus perennis* flowers.

Adults of *E. cinerea* have been reported to feed only on *Clematis* (Pinto 1991). This is the first report of *E. cinerea* feeding on *Anemone canadensis* foliage, and of the cinereous form of this beetle occurring in Wisconsin (Pinto 1991). Both *Clematis* and *Anemone* are in Ranunculaceae. Adults of *E. funebris* have been reported to feed on a variety of plants, including both native species in *Solanum* and crops in Solanaceae (Pinto 1991). This is the first report of *E. funebris* feeding on *Physalis heterophylla* foliage; *Physalis* is also in Solanaceae.

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