

LARRA BICOLOR (HYMENOPTERA: SPHECIDAE: LARRINAE)
COLLECTED IN PHEROMONE- AND
PHENYLACETALDEHYDE-BAITED TRAPS

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Several efforts have been made to import natural enemies of *Scapteriscus* mole crickets since their arrival in the southeastern USA about 1900. One of these natural enemies was the sphecid wasp *Larra bicolor* F. Populations of *L. bicolor* from Bolivia were released between October 1988 and June 1989, and became established in Alachua County, Florida (Frank et al. 1995). Since there is no demonstrated method to sample for *L. bicolor*, the nectar-bearing plant *Spermacoce verticillata* L. was established near several release sites so that wasp visits could be observed. Wasps were not observed until the fall of 1993, and wasps continued to be seen through September 1994. By 1995, it was concluded that *L. bicolor* had dispersed at least a distance of 4 km from release sites (Frank et al. 1995). Our note documents the collection of *L. bicolor* adults in agricultural fields in northwestern Alachua County that are at least 22 km from the original release sites.

From 18 June to 10 October 1997, white plastic funnel traps ("bucket" or Universal Moth Traps, International Pheromone Systems, Wirral, Merseyside, England) were placed in an area planted to over 470 ha. of cotton, *Gossypium hirsutum* L., to attract beet armyworm, *Spodoptera exigua* (Hübner) and fall armyworm, *S. frugiperda* (J. E. Smith) (Lepidoptera: Noctuidae). Traps were baited with either commercially-produced sex pheromones, phenylacetaldehyde (C₆H₅CH₂CHO, a floral attractant obtained from Aldrich Chemical Co., Milwaukee, WI) in plastic caps (20 mm diameter, 13 mm height; 0.2 or 0.5 ml phenylacetaldehyde per cap), or a combination of pheromone and phenylacetaldehyde. Pheromone lures were attached to the bottom of a cork that was placed in a hole in the canopy of the bucket trap. The phenylacetaldehyde cap was hot-gun glued (Arrow Fastener Co., Saddle Brook, NJ) to the bottom of the cork, which was placed in the trap canopy. The combination lure was composed of a cork with attached cap and the pheromone lure attached to the outside of the cork. Three tests were conducted in separate cotton fields. The first used Hercon® (Hercon Environmental Corp., Emigsville, PA) pheromone lures for *S. exigua*, the second used Scentry® (Ecogen, Inc., Langhorne, PA) lures for *S. exigua*, and the third used Trécé® (Trécé, Inc., Salinas, CA) lures for *S. frugiperda*. Four replications of the three treatments were placed within each field along pivot roads or along the field edges. Traps were observed three times weekly and pheromone and phenylacetaldehyde lures were replaced every two weeks.

Larra bicolor was collected in 2 of the 3 fields over seven different dates. The first wasp was collected in the Hercon field 18 June, with subsequent collections in the Trécé field 23 June (1 collected) and 11 July (2 collected). Higher numbers of wasps were collected in the fall, as 53 wasps were found in late September-early October. Peak capture was 29 September when 48 wasps were collected over a 5 day period in 6 separate traps. Of the total 57 *L. bicolor* collected, 32 were found in traps baited with the pheromone-phenylacetaldehyde combination, 23 were found in the phenylacetaldehyde-baited traps, and only 2 were found in the pheromone-baited traps.

Nontarget Hymenoptera have been collected in bucket traps placed in field crops which were baited for several different noctuid species (Adams et al. 1989, Mitchell et al. 1989, Gauthier et al. 1991), however, this is the first report for collection of *L. bicolor*.

SUMMARY

Larra bicolor was collected as a nontarget species in white bucket traps baited with sex pheromones and the floral attractant phenylacetaldehyde in an agricultural area in northwestern Alachua County, Florida. The first wasp was collected in mid-June, but larger numbers of wasps were collected in late September and early October. More wasps were collected in traps that had phenylacetaldehyde as a lure. This collection method may aid researchers in determining the dispersal and effectiveness of this natural enemy of *Scapteriscus* mole crickets.

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