OBSERVATIONS ON COMMENSAL DIPTERA (MILICIIDAE AND CHLOROPIDAE) ASSOCIATED WITH SPIDERS IN ALABAMA

A number of commensal Diptera feed simultaneously with spiders on fluids coating the exterior of spider prey (Robinson, M. H. and B. Robinson. 1977. Psyche, 84:150-157; Sivinski, J. and M. Stowe. 1980. Psyche, 87:337-348). Some of these Diptera were observed on prey of three species of spiders in Lee Co., Alabama during 1979-1983 (Table 1). On 18 October 1979 an adult green lynx spider, *Peucetia viridans* (Hentz), was found feeding on a honey bee, *Apis mellifera* L., in an old field near Auburn, Alabama. A single *Desmometopa m-niqrum* (Zetterstedt) was feeding on fluids on the bee. On 12 November 1979, in the same location, four *D. m-niqrum* were found feeding on another honey bee captured by a green lynx spider. These two prey with commensals were among 20 prey of green lynx spiders collected in the old field habitat in 1979, a 10% incidence of commensalism. These two instances were the only observations of

Table 1.—Commensal Diptera associated with spiders and their prey in Lee Co., Alabama, 1979-1983.

Commensal Diptera			
Taxon	Total	Prey species	Spider species
Milichiidae:			
Desmometopa m-niqrum	5	*Apis mellifera* (Hymenoptera, Apidae)	*Peucetia viridans* (Oxyopidae)
D. m-niqrum	2	*A. mellifera*	*Phidippus audax* (Salticidae)
Neophyllomyza sp.	2	*Leptoglossus phyllopus* (Hemiptera, Coreidae)	*Xysticus elegans* (Thomisidae)
Milichiella lacteipennis	4	*Brochymena quadripustulata* (Hemiptera, Pentatomidae)	*P. viridans*
M. lacteipennis	13	*L. phyllopus*	*P. viridans*
Neophyllomyza sp.	4	*L. phyllopus*	*P. viridans*
Paramyia nitens	1	*L. phyllopus*	*P. viridans*
Chloropidae:			
Olcella cinerea	17	*L. phyllopus*	*P. viridans*
Olcella sp.	1	*L. phyllopus*	*P. viridans*

green lynx spiders feeding on honey bees in this field. The only other instance of *D. m-nigrum* feeding as a commensal was observed on 15 May 1983, when an adult female jumping spider, *Phidippus audax* (Hentz), was found feeding on a honey bee in a fencerow near Auburn. Two *D. m-niqrum* were collected from this prey item.

On 9 June 1983 an adult female crab spider, *Xysticus elegans* Keyserling, was observed feeding on a leaf-footed bug, *Leptoglossus phyllopus* (L.), in the fencerow. Two *Neophyllomyza* sp. were feeding on this prey item. On 4 September 1983 an adult green lynx spider was found on a sapling tree growing on a lawn ca. 20 m from the fencerow. It had captured a stink bug, *Brochymena quadripustulata* (F.). Four *Milichiella lacteipennis* (Loew) also were feeding on this bug.

Only one of 74 prey (1.4%) of green lynx spiders collected in cotton fields in Lee Co., Alabama from 1979-1981 was found with commensals. On 31 August 1981, 36 commensal flies were found feeding simultaneously on a *L. phyllopus* captured by a green lynx spider in a cotton field. Three species of Milichiidae and two species of Chloropidae were collected from this prey item (see Table 1). The specimens of *L. phyllopus* and *B. quadripustulata* with commensals were the only representatives of these hemipteran species captured by spiders in this study.

Sivinski and Stowe (1980) suggested that hymenopterans may be more attractive to Milichiidae than are other prey. This is supported in the case of *D. m-niqrum* by our observations that this species was found feeding as a commensal only on honey bees. The other commensal dipterans, however, were apparently attracted to the two hemipteran prey species. Prey preference studies are needed to determine the range of prey which are attractive to the various commensal species.

Commensal associations with spiders by *M. lacteipennis*, *O. cinerea*, and *Olcella* sp. have not been reported previously.

We thank C. W. Sabrosky, Resident Cooperating Entomologist, Systematic Entomology Laboratory, USDA, for identifying Diptera reported in this work.

1987. The Journal of Arachnology 15:272

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Manuscript received August 1986, revised November 1986.