

bark, but she stopped often for long periods to manipulate the spermatophore. Fewer contractions of the terminalia were seen, and the valvulae gradually dropped ventrally.

The spermatophore was coated with a hemispherical, amber, gelatinous substance which covered the female's genital region. A hyaline region (presumably the sperm) was visible within the gelatinous mass of the spermatophore. When the spermatophore was attached to the female's terminalia, the hyaline region was situated between the valvulae and just dorsad the subgenital plate.

The female died about 5 h after mating had ended. The spermatophore was still attached to the female, but it had dried to a cylindrical form. In this short time, the posterior end of her abdomen had become desiccated. No eggs had been laid. Clumps of sperm were visible in the spermathecal area of the dissection I made of the female, but I was unable to locate the spermatheca.

Mating behavior has not been described previously for *T. slossonae* or *P. pollutus*, but appears to follow a pattern described for other species of Psocoptera (cf. Klier 1956. Zool. Jb. (Anatomie) 75: 207-86). The activity of the female during copulation has only been seen in one other species, *Trichadenotecnum alexanderae* Sommerman, and this happened rarely (Betz, unpublished data). The major reorientation of the pair during copulation is unique to the *T. slossonae*-*P. pollutus* mating. Klier (1956) observed a male of *Trichadenotecnum sexpunctatum* (Linnaeus) ending copulation by passing through a position similar to the one shown in Fig. 2. The genitalic coupling of the *T. slossonae*-*P. pollutus* pair appeared to be strong. Perhaps the female's death resulted from the pair's change of position, causing the hypandrial claspers of the male to tear some of the female's tissue that articulated with the internal plate.—B. W. BETZ, 1000 N. Lake Shore Dr., Chicago, IL 60611 USA.

A SEX ATTRACTANT FOR *PLATYSENTA VIDENS* (GN.) SIMILAR TO THE SEX PHEROMONE OF *HELIOTHIS VIRESCENS* (F.)—Recently we reported a highly effective blend of sex pheromone components of *Heliothis virescens* (F.) formulated on the basis of preliminary analyses of volatiles released by calling females (Tumlinson et al. 1982. Pages 1-25 in "Insect Pheromone Technology: Chemistry and Applications"). Although this blend, composed of 48% (Z)-11-hexadecenal, 12% hexadecenal, 16% (Z)-9-tetradecenal and 24% tetradecanal, was a significantly better lure for *H. virescens* males than other reported blends (Tumlinson et al. 1975. J. Chem. Ecol. 1: 203-14, Klun et al. 1979. Science 204: 1328-30), sticky traps baited with this blend also captured *Platysenta videns* males.

In studies conducted in a fallow field an average of 6.3 *P. videns* males per trap per night (2 replicates) were captured in Pherocon 1C® traps baited with 5 mg of the above blend in natural rubber septa during the first 6 nights. Similarly, an additional 31 males were caught in the same field one month later, perhaps corresponding to a second peak of emergence. Although the majority of captures were made in the fallow field which contained the host plant, goldenrod (*Solidago*) (Kimball 1965. The Lepidoptera

of Florida), 6 *P. videns* males per trap per night were also captured in sticky traps baited with this blend formulated in Conrel® fibers in a tobacco field more than 100 m from the nearest high concentration of goldenrod.

Although these data are preliminary the results indicate that this blend of C₁₄ and C₁₆ aldehydes is an effective sex attractant for male *P. videns*. However, inasmuch as *H. virescens* males were captured in traps baited with these lures at low population levels, it is probable that the 48:12:16:24 ratio of these aldehydes is not the precise ratio released by calling *P. videns* females. More importantly, because *P. videns* males were not attracted to traps baited with *H. virescens* females, this blend does not accurately represent the volatile sex pheromone released by calling *H. virescens* females. Subsequent analyses have, in fact, indicated that the actual pheromone blend of *H. virescens* contains 2 additional components and different ratios of the components used in the blend that is attractive to *P. videns* males. Mention of a commercial or proprietary product does not constitute an endorsement by the USDA.—P. E. A. TEAL, J. R. McLAUGHLIN, J. H. TUMLINSON, AND R. R. RUSH, Insect Attractants, Behavior, and Basic Biology Research Laboratory, Agric. Res. Serv., USDA, Gainesville, FL 32604 USA.

EARLY-SEASON PARASITIZATION OF FALL ARMYWORM (LEPIDOPTERA: NOCTUIDAE) LARVAE IN MISSISSIPPI—Fall armyworm, *Spodoptera frugiperda* (J. E. Smith), larvae were collected from whorl-stage corn during an extensive survey conducted in the eastern half of Mississippi from 26 April through 1 June 1979. These larvae were reared on a wheat germ based diet in the laboratory as part of a procedure for analyzing the early-season phenology of fall armyworm populations (Hogg, D. B., H. N. Pitre, and R. E. Anderson. 1982. Environ. Ent. 11: 705-10). Herein we report parasitoids recovered and rates of larval parasitization.

Five parasitoid species from four families were reared from fall armyworm (Table 1). We divided the area included in the survey into four geographic regions to identify latitudinal differences in parasitization. Region 1 includes the coastal district, the southernmost area in the state; 52 larvae were reared from collections made between 26 April and 9 May in 2 counties (Pearl River and Stone). Region 2 includes the south-central and southeast districts; 169 larvae were reared from collections made between 9 and 30 May in 4 counties (Covington, Jones, Newton, and Smith). Region 3 includes the central and east-central districts; 296 larvae were reared from collections made between 9 May and 1 June in 4 counties (Attala, Clay, Oktibbeha, and Winston). Region 4 includes the north-central and northeast districts; 121 larvae were reared from collections made between 16 May and 1 June in four counties (Alcorn, Lee, Marshall, and Tippah). Percent parasitization was calculated using the total number of fall armyworm larvae reared from each region. Larvae ranging from 2nd to 6th instar were collected in each region. Collections were not made concurrently in all the regions, due to latitudinal variation in phenology of the fall armyworm populations. However, there was overlap in collection dates among all the regions except for the 2 extremes.

Two parasitoid species, *Apanteles marginiventris* (Cresson) and