host trees as the McPhails, but separated by a distance of at least 3 m. Traps were subsequently serviced during regular weekly runs for 3 consecutive weeks. I also hung one each of the 2 types of traps in a 28.6 m² outdoor cage, stocked with ca. 10,000 laboratory-reared adult A. suspensa. These traps were hung at a height of 2 m, and were 3 m from each other. Following an exposure period of 2 h (11 am to 1 pm), I removed the traps and counted the flies.

McPhail traps were far superior to sticky disc traps. Of the 25 McPhail traps placed in the field, 12 captured 1 or more A. suspensa at some time over the 3-week period (6 traps became positive once, 1 trap twice, and 5 three times). Of the 25 sticky disc traps hung in the same trees, only 7 captured A. suspensa: (6 traps became positive once, and 1 trap 3 times). During the entire 3-week exposure period, there were 7 sites at which only the McPhail traps captured A. suspensa, compared to just 2 sites at which captures were made only by the discs. At 5 other sites, both McPhails and discs captured A. suspensa, and at the remaining 11 sites, neither McPhails nor discs captured flies. On a weekly basis, there were 7, 4, and 9 positive McPhail traps, respectively, compared to 2, 3, and 0 positive disc traps (ratio, 2.6:1). This difference in capture rate (between traps types) is statistically significant (P < 0.05). Total A. suspensa adults captured, on a weekly basis, were: McPhail traps: 32, 30, and 38 flies/week, respectively; total, 100. Sticky disc traps: 3, 4, and 5 flies, respectively; total, 12. Ratio = 8.3:1, which is significant (P < .001). In the cage experiment, the sticky disc trap captured only 74% (154) as many A. suspensa as the McPhail trap (208), which is also significant (P < 0.01).

McPhail traps require a relatively large initial investment per trap (ca. $11.00), compared to a few cents for a sticky disc. They are also non-specific, bulky, and may smash when dropped or vandalized. However, they generally remain serviceable for years, and for A. suspensa surveys, they are much superior to sticky disc and other traps. It is recommended that their use be continued, at least until an effective chemical lure for A. suspensa becomes available. Many compounds have been screened (Burditt and McGovern 1979, USDA, ARS, ARM-S-6), and the most promising to date appear to be ammonium acetate and 2-methyl-3 phenylpropyl propionate (Burditt, pers. comm.). However, significant improvement in A. suspensa trapping efficacy probably must await the development of a sex attractant.—PETER C. WITHERELL, Methods Development Station, USDA, APHIS, Plant Protection & Quarantine, 13601 Old Cutler Rd., Miami, FL 33158 USA.

ATTEMPTED HYBRIDIZATION BETWEEN TWO PSOCID SPECIES (PSOCOPTERA: PSOCIDAE)—Hybridization between species of Psocoptera is unknown. Only 2 examples of attempted hybridization between species have been recorded. Schneider (1955, Biol. Zent. 74: 273-310) made reciprocal pairings between 10 males and 10 females of Euclisiella quadrimizedulata (Lattrille) and E. conspircata (Rambur). Only 2 females of E. quadrimizedulata were fertilized, and these laid eggs. However, the eggs died within 4 weeks with no evidence of embryonic development. Sommerman

An attempted hybridization between a male of *Trichadenoteinum stollsonae* (Banks) and a female of *Psocidus pollutus* (Walsh) is described. Late stage nymphs and adults of both species were collected by E. L. Mockford on 11 October 1978 from oaks (*Quercus* spp.) and waxmyrtle (*Myrica* sp.) at Lochloosa Wildlife Management Area, Alachua County, Florida. Specimens were kept with tree bark in 2 cotton-stoppered test tubes that were stored in a cooler during transport to the laboratory, and then in a desiccator with a relative humidity of 80±5%, temperature of 23.3°:18.0°C light:dark, and a photoperiod of 15 h:9 h light:dark.

I brought members of the 2 species together in the laboratory on 6 November 1978. After about 5 min., I observed a male of *T. stollsonae* fanning his wings alongside a female of *P. pollutus*. The male spun around while the female raised the anterior end of her body, then backed beneath her. The pair joined their genitalia, and the male lifted the female off the bark. In this position (Fig. 1), the end of the male's abdomen was lateral to the female's abdomen. This position lasted only briefly because the female became active and tried to dismount unsuccessfully 3 times. Then the pair assumed another position (Fig. 2), and remained so until mating was completed, about 2 min.

Copulation was ended by the male after about 3 min., and both male and female were active. The male ran over the bark for several minutes. The female ran, but soon returned to the spot where mating had occurred, and remained there for over 10 min. During this time, she manipulated the spermatophore on her terminalia. The female intermittently contracted her terminalia or her entire abdomen, but otherwise remained almost motionless. Ten min. after mating had ended the female began walking over the

![Fig. 1-2. Positioning of the male of *Trichadenoteinum stollsonae* and the female of *Psocidus pollutus* during copulation. 1) Initial position (lateral view), 2) Final position (dorsal view).](image-url)
bark, but she stopped often for long periods to manipulate the spermatophore. Fewer contractions of the terminalia were seen, and the valvlae 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 valvlae 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, *Trichadenotocum alexandrovae* 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 *Trichadenotocum sexpunctatum* (Linnaeus) ending copulation by passing through a position similar to the one shown in Fig. 2. The genital 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.

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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 *Heliotis 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, Knut et al. 1979. Science 204: 1828-30), sticky traps baited with this blend also captured *Platycta videna* 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 Phercon 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