



Field Confirmation of the Phonotaxis of *Euphasiopteryx depleta* (Diptera: Tachinidae) to Calling Males of *Scapteriscus vicinus* (Orthoptera: Gryllotalpidae)

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FIELD CONFIRMATION OF THE PHONOTAXIS OF
EUPHASIOPTERYX DEPLETA (DIPTERA: TACHINIDAE)
TO CALLING MALES OF *SCAPTERISCUS VICINUS*
(ORTHOPTERA: GRYLLOTALPIDAE)

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Euphasiopteryx depleta (Wied.) was reared from an unidentified species of *Scapteriscus* (Orthoptera: Gryllotalpidae) by Wolcott (1940). In Brazil and Paraguay, *E. depleta* has been attracted to sound traps (Walker 1982) broadcasting the synthesized songs of *S. vicinus* Scudder, *S. acletus* Rehn & Hebard, and *S. imitatus* Nickle & Castner (Fowler & Garcia 1986, Fowler & Kochalka 1985). As species of *Scapteriscus* are exotic pests in the U.S., accidentally introduced from southern South America (Nickle & Castner 1984), the attraction of the Neotropical *E. depleta* to synthesized broadcast calls of *Scapteriscus* makes it a candidate for introduction in a biological control program for species of *Scapteriscus*.

Although we have reared *E. depleta* from field-collected *S. vicinus* Scudder in the state of São Paulo, Brazil (Fowler & Garcia 1986), and Wolcott (1940) reared it from field-collected *Scapteriscus* sp. in the state of Pará, Brazil, its low incidence adds some doubt as to its potential as a biological control agent. However, *E. depleta* can be attracted in large numbers to broadcast synthesized songs of *Scapteriscus* spp. (Fowler & Garcia 1986), which suggests this phonotactically orienting parasitoid could respond numerically to mole cricket density. Although mole crickets of the genus *Scapteriscus* are univoltine in the state of São Paulo, with male *S. vicinus* calling from September through January, *E. depleta* can be attracted to sound traps practically all year. This suggests that species of *Scapteriscus* are not the only orthopteran hosts of *E. depleta*, or that *E. depleta* is not a normal parasitoid of species of *Scapteriscus* and that the attraction of large numbers of female *E. depleta* to sound traps might be a physiological quirk. This would also explain its low incidence (<1%) in field-collected mole crickets.

To test if *E. depleta* females are attracted to calling *S. vicinus* males under normal field conditions and not to the super-stimulus of a sound trap, I marked calling *S. vicinus* chambers during September 1986, in Rio Claro, São Paulo, Brazil. Because calling chambers of individual *S. vicinus* males are used for many days (Fowler 1986),

it was possible to place a doughnut-shaped piece of plastic sheeting around the calling chamber opening before males began to call at dusk each day. Tanglefoot® was applied to the plastic sheeting, and the sheeting was collected each evening after the males had stopped their daily calling. This procedure was followed for 29 calling chambers over a 3-week period. I expected flies orienting to larviposit at the chambers of calling *S. vicinus* males to be trapped in the Tanglefoot.

Over the 16 days of monitoring (464 calling chamber days), 13 female *E. depleta* were captured on the sticky traps. These results demonstrate that *E. depleta* is normally attracted to *S. vicinus* calls, and is therefore a probable parasitoid of this cricket. Although the total number of flies trapped during this study (13) was much less than that trapped at a sound trap on a normal night, the results suggest that *E. depleta* can find reproductively active males of *S. vicinus*.

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