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# ALTERNATE ORTHOPTERAN HOSTS (*ANUROGRYLLUS* SP.) OF *EUPHASIOPTERYX DEPLETA* (DIPTERA: TACHINIDAE)

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There is a growing interest in the potential of using the tachinid *Euphasiopteryx depleta* (Wied.) as a natural enemy for introduction into the U.S. to control mole crickets of the genus *Scapteriscus* (Orthoptera: Gryllotalpidae). Adult *E. depleta* are attracted to the synthesized calling songs of mole crickets (Fowler & Kochalka 1985), and can be successfully reared from mole crickets under laboratory conditions (Fowler & Garcia 1986), as well as from field-collected *S. acletus* Rehn & Hebard, *S. vicinus* Scudder and *S. abbreviatus* Scudder (Fowler & Garcia 1987). However, *E. depleta* can also be captured at synthesized mole cricket calls (Walker 1982), even during those months when adult mole crickets are not calling. This indicates that *E. depleta* must also parasitize other nocturnally active orthopteran species (Fowler & Garcia 1987).

During the course of our collections and laboratory rearings of gryllids, we have recovered *E. depleta* from a species of *Anurogryllus*. Four *E. depleta* were obtained from 564 crickets collected in Ipeúna, state of São Paulo, Brazil (26 Feb. 1986, and 15-16 August 1986). Additionally, we have successfully reared *E. depleta* from *Anurogryllus* sp. after placing larvae under the crickets' pronota. As *E. depleta* has been reared from *S. abbreviatus*, which does not call, it is possible that song is not a prerequisite for host location. However, we feel confident that the songs of *Anurogryllus* are attractive to *E. depleta*, based upon preliminary tests with taped *Anurogryllus* songs in the field.

We have also been able to rear *E. depleta* in the laboratory on nymphs and adults of an undescribed species of *Gryllus*, using the same techniques. This suggests that laboratory colonies could be maintained on *Gryllus* for subsequent field release. We have yet to find a field-collected *Gryllus* (>1,000 assayed) to be parasitized by *E. depleta*. Our collected material is maintained in our private collections.

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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),