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## First Scarab Host for *Strongygaster Triangulifer* (Diptera: Tachinidae): the Dung Beetle, *Aphodius Fimetarius* (Coleoptera: Scarabaeidae)

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**FIRST SCARAB HOST FOR *STRONGYGASTER TRIANGULIFER*  
(DIPTERA: TACHINIDAE): THE DUNG BEETLE, *APHODIUS*  
*FIMETARIUS* (COLEOPTERA: SCARABAEIDAE)<sup>1</sup>**

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ABSTRACT

We report *Strongygaster* (= *Hyalomyodes*) *triangulifer* as a solitary primary parasite of the adult introduced dung beetle, *Aphodius fimetarius*. This is the first record of this tachinid fly parasitizing scarabs.

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The Old World dung beetle, *Aphodius fimetarius* (L.) (Coleoptera: Scarabaeidae), is globally distributed in temperate zones. In northeastern Ohio this species is ubiquitous and can be very numerous locally. Adults of both sexes are distinctive among introduced and native Aphodiini by their bright red elytra, black head and pronotum, and large size: to 8.5 mm (Blatchley 1910). They reproduce in the dung of many herbivorous mammals, especially cattle, and in moist litter. Colonizing adults tunnel extensively and oviposit in drying dung pats; larvae develop in cells within the pat. According to Mohr (1943), *A. fimetarius* is essentially univoltine; adults overwinter in dung, oviposit in spring, and produce an autumn adult cohort.

We obtained ca. 200 adult *A. fimetarius* in mid-April 1989 from overwintered cattle dung pats in a wooded pasture near Apple Creek, Ohio (Wayne Co.). They were held individually in plastic 30 ml cups at room temperature and 60% RH. Eight of these captive beetles produced a single fly larva each. From puparia that subsequently formed, adult tachinid flies eclosed in five days (ca. 5 May 1989) and were identified by the USDA Systematic Entomology Laboratory as *Strongygaster* (= *Hyalomyodes*) *triangulifer* (Loew).

This New World fly typically parasitizes only adult insects [Thompson (1954) viewed reports of larval parasitism as abnormal occurrences]. Previously reported hosts span a broad phylogenetic range that includes Orthoptera, Dermaptera, Hemiptera, Coleoptera, and Lepidoptera (Lange 1950, Sabrosky and Braun 1970, Smith and Kok 1983, Kevan and Koshnaw 1988). Our record is the first of such parasitism in a scarab, and with it nine beetle families now contain reported hosts for *S. triangulifer* (Table 1).

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Table 1. — Beetle families containing reported hosts for *Strongygaster triangulifer* (Loew).

BEETLE HOST FAMILY	REFERENCE
Scarabaeidae	(this report)
Lampyridae	Sabrosky and Braun 1970
Cleridae	Turnbow and Franklin 1979
Meloidae	Cortés and Hichins 1969
Alleculidae	Thompson 1954
Nitidulidae	Williams et al. 1981
Coccinellidae	Thompson 1954, Wellso and Hoxie 1969
Chrysomelidae	Thompson 1954, Sabrosky and Braun 1970, Wellso and Hoxie 1969, Herzog 1977.
Curculionidae	Thompson 1954, Sabrosky and Braun 1970

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