



## A new species of *Myiopharus* Brauer and Bergenstamm (Diptera: Tachinidae) parasitic on adults of the sunflower beetle, *Zygogramma exclamationis* (Fabricius)

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### Abstract

A new species of the New World genus *Myiopharus* Brauer and Bergenstamm, *Myiopharus neilli* sp. nov., is described from the Great Plains, bringing the number of species of this genus known from America north of Mexico to 15. *Myiopharus neilli* is a parasitoid of adults of the sunflower beetle, *Zygogramma exclamationis*. It belongs to the *M. dorsalis* (Coquillett) species group, the females of which possess a strongly sclerotized and laterally flattened ovipositor and a dense tuft of blunt setae medially on the katapisternum. Both sexes of *M. neilli* are described and illustrated, the life history of the species is reviewed, and the *M. dorsalis* group is characterized.

**Key words:** Diptera, Tachinidae, *Myiopharus*, sunflower beetle, new species

### Introduction

The sunflower beetle, *Zygogramma exclamationis* (Fabricius), is a native North American species that feeds on sunflowers during its larval and adult stages. It is present throughout the Great Plains and is the major defoliating insect pest of the cultivated sunflower, *Helianthus annuus* L. (Knodel *et al.* 2000; Brewer & Charlet 2004). Economically significant damage is mostly confined to Minnesota, North Dakota, South Dakota, and southern Manitoba (Charlet 1992; Brewer & Charlet 2004).

Three species of Tachinidae have been reared from the sunflower beetle, all in the genus *Myiopharus* Brauer and Bergenstamm. Two are exclusively parasitoids of the larvae, *M. macellus* (Reinhard) (formerly *Doryphorophaga macella*) and *M. doryphorae* (Riley) (formerly *Doryphorophaga doryphorae*). *Myiopharus macellus* is a common parasitoid of the sunflower beetle and has been reported to parasitize up to 100% of larvae (Charlet 1992; Charlet 2003). *Myiopharus doryphorae* is principally a parasitoid of the Colorado potato beetle, *Leptinotarsa decemlineata* (Say), but has been reared on rare occasions from sunflower beetle larvae in southern Manitoba (Neill 1982; Knodel *et al.* 2000). The third species is a parasitoid of adult sunflower beetles and has been reported in the literature as "*Myiopharus* sp." (Neill 1982; Charlet 1992; Charlet 1999; Knodel *et al.* 2000; Brewer & Charlet 2004). Although the life history of this species was carefully detailed over two decades ago by Neill (1982), and the species was known to be new to science at the time (specimens of it having been identified for Neill by D.M. Wood of Agriculture and Agri-Food Canada, Ottawa), it has remained undescribed. It first came to my attention when I discovered specimens of it in a shipment of tachinids reared from sunflower pests sent to me for identification by L.D. Charlet (see Materials and Methods). It is the purpose of this paper to describe this new species and to discuss its relationships within the genus *Myiopharus*.