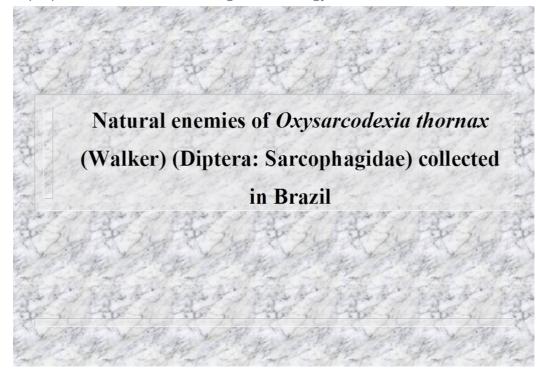
## **Open Peer Review on Qeios**

## Natural enemies of Oxysarcodexia thornax (Walker) (Diptera: Sarcophagidae) collected in Brazil

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Paper presented at the Brazilian Congress of Zoology in the form of banner.



Flies are of medical and veterinary importance, since they can act to transmit pathogens to humans and animals (Chow, 1940). These dipterans are of great medical and veterinary importance because they are myiasis producers and carriers of pathogenic microorganisms for humans and animals (Greenberg, 1971). Flies have been found carrying more than 100 species of disease-causing organisms such as bacteria, protozoa and helminths (Greenberg, 1971). As a means of controlling these insects, in addition to chemical technique through insecticides, so-called natural regulators of various pests can be used, both in agriculture and in animal husbandry areas (Silveira et al., 1989). The purpose of this note is to report the natural enemies of *Oxysarcodexia thornax* (Diptera: Sarcophagidae) collected several substrates

## Figure

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The flies were attracted to traps consisting of dark-colored cylindrical metal cans, measuring 19 cm height and 9 cm diameter, with two openings measuring 30 mm in width, located in the lower third of the can, to allow flies to enter. Human feces, fish, bovine liver, and chicken served as bait for attracting the flies. Sixteen traps were used, spaced two meters apart. These were hung on trees at a height of one meter above the ground. Four traps were utilized for each type of bait. The collected insects were taken to the laboratory, sacrificed using ethyl ether and kept in 70% alcohol for further identification. The baits were removed from the traps and placed in plastic containers with a layer of sand to form the substratum for the larvae to pupate in. The sand was then sifted to collect the pupae. These were then placed individually in gelatin capsules (00 number) and kept until the emergence of the flies or their parasitoids.

Regarding the parasitoids Gnathopleura quadridentata (Wharton) (Braconidae), Brachymeria podagrica (Fabricius) (Chalcididae), Hemencyrtus sp. and Pachycrepoideus vindemmiae (Rondani) (Pteromalidae) the parasitism percentage was 20%, 11%, 10% and 16%, respectively. The prevalence of parasitism obtained by the species was high, probably due to the small number of samples collected. In Itumbiara-GO, O. thornax em was found parasitized by the following parasitoids: Nasonia vitripennis (Walker) (Pteromalidae) and Saplangia endius Walker (Pteromalidae) (Marchiori, 2000). This note records the first occurrence of B. podagrica, Hemencyrtus sp. and P. vindemmiae parasitizing O. thornax in Brazil. Considering the importance that this insect assumes in public health, as a vector of disease-causing agents, it is essential to survey these species of natural enemies to aid proper control of flies through integrated methods.

Figure

They collected 100 pupae of *Oxysarcodexia thornax* Walker (Diptera: Sarcophagidae), of which 23 were collected from human feces, 31 from fish and 46 from bovine kidneys. This species in Itumbiara has also been found in liver and bovine feces (Marchiori et al., 2000; 2000a). As shown in Table 1, 48 pupae were found with parasitoids of four species. In human feces, 20 parasitoids were obtained, in fish 17 and bovine kidneys, 20. In this last bait was found a gregarious parasitoid *Hemencyrtus* sp. (Hymenoptera: Encyrtidae), which from one pupa emerged 10 parasitoids gregarious. The total prevalence of parasitism was 86.9% in human feces, 54.8% in fish and 42.5% in bovine kidneys.

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Figure

Sarcophagidae) on various substrates.		
Parasitoids	Number of specimens	Percentage
Braconidae:	Low allow a	Widis -
Gnathopleura quadridentata	20	35.0
Chalcididae:	at P Flat P 2	Ser 2 7
Brachymeria podagrica	11	19.3
Encyrtidae:	Carl and the a	
Hemencyrtus sp.	10	17.5
Pteromalidae:	179 11 19 1	6000 2
Pachycrepoideus vindemiae	16	28.2
Total	57	- Start