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Source: Florida Entomologist, 89(1) : 93-94

Published By: Florida Entomological Society

URL: https://doi.org/10.1653/0015-4040(2006)89[93:OOFFDT]2.0.CO;2

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OCCURRENCE OF FRUIT FLIES (DIPTERA: TEPHRITIDAE) IN THE STATE OF ALAGOAS, BRAZIL

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The northeastern region of Brazil produces a substantial amount of fruit because of its climate, soil fertility, and good irrigation programs. However, as fruit production increases, so do tephritid fruit flies populations. Pest fruit flies occur in seven of the nine states that belong to this northeastern region, especially the following species: *Anastrepha fraterculus* (Wiedemann 1830), *Anastrepha sororcula* (Zucchi 1979), *Anastrepha obliqua* (Macquart 1835), and *Ceratitis capitata* (Wiedemann 1824) (Malavasi et al. 2000). In spite of the pest status of *C. capitata* and *Anastrepha* species in the State of Alagoas, no publication reporting their occurrence in Alagoas exists (Malavasi et al. 2000; Zucchi 2001).

Anastrepha fraterculus, *A. obliqua*, *A. sororcula* and *C. capitata* are of quarantine importance in many countries, especially the last species, due to the rigorous restrictions (Araújo et al. 2000; Sales & Gonçalves 2000). In Brazil, *C. capitata* and *A. fraterculus* severely damage only temperate fruit cultivations in the southeastern and southern regions, respectively. *Anastrepha obliqua* and *A. sororcula* have been considered as secondarily important pests (Malavasi et al. 2000). However, the expansion of fruit production in the northeastern region may change this situation. Therefore, a survey of tephritid populations is necessary in order to develop control strategies for these pests in all states of the region.

Severely infested fruits from unmanaged cultivars which belong to four plant species (*Mangifera indica* L- var. *ligata*, *Averrhoa carambola* L., *Psidium guajava* L. var. *paloma*, and *Jambosia* sp. L.) were collected from three families located in six estates in Alagoas (Maceió, 09°39'57"S/35°44'07"W; 16 m, Rio Largo, 09°28'42"S/35°51'12"W; 39 m, Paripueira, 09°28'30"S/35°32'30"W; 5 m, Arapiraca, 09°45'09"S/36°39'40"W; 264 m, Coruripe, 10°07'32"S/36°10'32"W; 16 m, and União dos Palmares, 09°09'46"S/36°01'55"W; 155 m) from February 2000 to July 2001. In total, thirty kilograms of infested fruits were collected, with an average of four larvae/fruit. The fruits were placed in containers with a layer of vermiculite as a pupation medium, and pupae were held in plastic boxes until emergence of adults. Voucher specimens were deposited at the Departamento de Entomologia, Fitopatologia e Zoologia Agrícola, Escola Superior de Agricultura Luiz de Queiroz (ESALQ), Universidade de São Paulo, Piracicaba, SP, Brazil. Identification of fruit flies was carried out by Dr. Roberto Antônio Zucchi on the basis of the morphological characteristics of the female ovipositor.

We report the presence of pest fruit flies for the first time in the State of Alagoas. *Anastrepha fraterculus*, *A. obliqua*, *A. sororcula*, and *C. capitata* were identified. *Anastrepha obliqua* and *A. fraterculus* infested all the fruits collected. In guavas the number of *A. fraterculus* was higher than that of *A. obliqua*. In the remaining host fruits, *A. obliqua* was the predominant species. *Anastrepha sororcula* was found in fruits of the Myrtaceae family (guavas and "jambos"). *Ceratitis capitata* was reared only from starfruits. *Anastrepha obliqua* and *C. capitata* were recovered in the largest numbers. In addition, a fruit fly parasitoid *Doryctobracon areolatus* Szépligeti (1911) (Hymenoptera: Braconidae) was found (Table 1). All parasitoids were associated with *Anastrepha* spp.

We thank Leila Flávia do Nascimento Lima, Esther Maria Gonzaga Amorim, and Regina Martins Santos (Secretaria Estadual da Agricultura, Abastecimento e Pesca, Maceió, Alagoas) for valuable help during the collections in Coruripe, and the institutions CNPq (grant no. 471828/2004-1), FAPEAL (grant no. 20031029421-0), and CAPES for providing financial support and scholarships.

SUMMARY

The occurrence of *Anastrepha fraterculus*, *A. obliqua*, *A. sororcula*, and *Ceratitis capitata* is reported for first time in the State of Alagoas. The specimens were obtained from starfruits *A. carambola*, guavas *P. guajava*, mangoes *M. indica*, and "jambos" (*Jambosia* sp.). The parasitoid *Doryctobracon areolatus* was recorded attacking the *Anastrepha* species.

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TABLE 1. FRUIT FLIES AND ASSOCIATED PARASITOIDS COLLECTED FROM FRUITS IN MACEIÓ, RIO LARGO, PARIPUEIRA, ARAPIRACA, CORURIPE AND UNIÃO DOS PALMARES, ALAGOAS, BRAZIL.

Host family	Host species	Species		Number of females (F) and males (M)
		Fruit fly	Parasitoid	
Anacardiaceae	*Mangifera indica* L.	*A. obliqua*	—	15F; 18 M
		A. fraterculus	—	1F
Myrtaceae	*Jambosia* sp.	*A. obliqua*	—	14F; 12M
		A. fraterculus	—	11F; 10 M
		A. sororcula	—	02F; 01M
	Psidium guajava L.	*A. fraterculus*	—	121F; 95M
		A. obliqua	—	25F; 21M
		A. sororcula	—	10F; 07M
		—	*D. areolatus*	23F; 15M
Oxalidaceae	*Averrhoa carambola* L.	*A. obliqua*	—	174F; 169M
		C. capitata	—	155F; 162M
		A. fraterculus	—	04F; 02M
		—	*D. areolatus*	18F; 08M

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