

Larvae of Fruit Flies, 7.  
*Anastrepha obliqua* (West Indian fruit fly)  
(Diptera: Tephritidae)<sup>1</sup>

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**INTRODUCTION:** The West Indian fruit fly, *Anastrepha obliqua* (Macquart), occurs in southern Florida and throughout the Caribbean, south to southern Brazil. The species has been widely known by its synonym, *A. mombinpraeoptans* Sein, or as a variety of the continental Neotropical species, *Anastrepha fraterculus* (Wiedemann) (Berg, 1979; Weems, 1970), and is one of several closely related species of *Anastrepha* (Weems, 1980). Numbers of host plants have been noted for the West Indian fruit fly but due to confusion between *A. obliqua* and *A. fraterculus*, and others in this species complex, it is unclear what the true host range is for each species. Weems (1980) noted numerous tropical fruit hosts for the "fraterculus complex." A long list of recorded hosts for the West Indian fruit fly was also noted by Norrbom and Kim (1988), with mango (*Mangifera indica* L.), guava (*Psidium guajava* L.), and hog plums (*Spondias* sp.) being most often mentioned.

**LARVAL DESCRIPTION:** Larva white; typical fruit fly shape (cylindrical-maggot shape, elongate, anterior end narrowed and somewhat curved ventrally, with anterior mouth hooks, ventral fusiform areas, and flattened caudal end); last instar larvae range in length from 8-10mm; venter with fusiform areas on segments 2-10; anterior buccal carinae usually 9-10 in number (Fig. 1); anterior spiracles (Fig. 2) asymmetrical in lateral view with center depressed, and with tubules averaging 12-14 in number.

Cephalo-pharyngeal skeleton (Fig. 3) with large pointed convex mouth hook each side, with rounded dorsal lobe, and each hook about 2.5X hypostome length; hypostomium with thin subhypostomium; post-hypostomial plates curved to dorsal bridge, fused with prominent sclerotized rays of central dorsal wing plate; parastomium broadly elongate; dorsal wing plate with several prominent rays and strong sclerotization on ventral border; dorsal bridge relatively evenly sclerotized, merging to a strongly sclerotized dorsal edge of pharyngeal plate; a prominent hood on pharyngeal plate.

Caudal end (Fig. 4) with paired dorsal papillules (D1 and D2) close together and angled about 45 degrees from each spiracular plate; intermediate papillules 3 in number, with I1-2 in a nearly horizontal line on a slight elevation; I3 faint and distant dorso-laterally and nearer to L1 which is on dorso-lateral edge of caudal end; V1 faint and about twice as distant from I1-2 as from anal lobes; posterior spiracles (Fig. 5) as 3 elongated peritremes (length = 5X width) on each spiracular-plate, with ventral 2 peritremes angled to center from ventral direction and remaining peritreme angled from dorso-lateral angle; interspiracular processes (hairs) well developed, at 4 sites on each plate, and tips sometimes bifurcate; anal lobes (Fig. 6) entire.

**DISCUSSION:** *Anastrepha* larvae in this species complex are all relatively similar but careful observations of the buccal carinae, anterior spiracles, and papillule position of the caudal end will distinguish the species (see Heppner, 1984, 1990; Steck, et al., 1990). *Anastrepha obliqua* has anterior spiracles like *Anastrepha ludens* (Loew) but with fewer tubules and *A. ludens* usually has the anal lobes bifid. *Anastrepha suspensa* (Loew) is more similar but has the anterior spiracles more symmetrical than *A. obliqua*. On the caudal end *A. ludens* and *A. suspensa* have I1-2 angled and not horizontal like *A. obliqua*, while in *Anastrepha interrupta* Stone there also is a faint I4 present. D1-2 are closer together in *A. obliqua* than in the other related species. *Anastrepha fraterculus* has the anterior spiracles with a higher tubule number (15-17) than *A. obliqua*.

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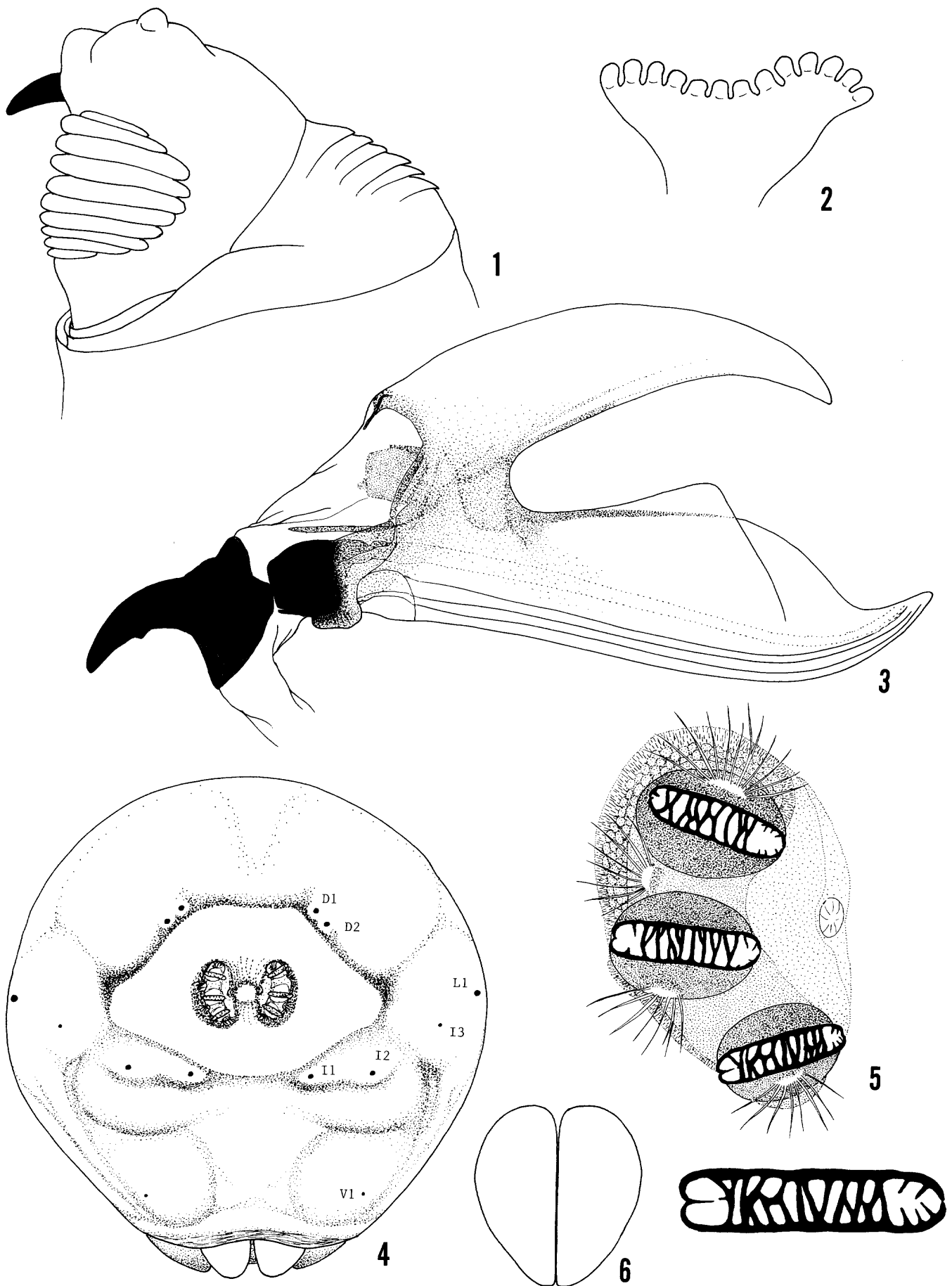


Fig. 1-6. *Anastrepha obliqua*: 1, head and buccal carinae; 2, anterior spiracle; 3, cephalo-pharyngeal skeleton (left side); 4, caudal end of last instar larva; 5, posterior spiracles (left side), with detail of one peritreme; 6, anal lobes.