

Anastrepha striata Schiner

(DIPTERA:TEPHRITIDAE)¹

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INTRODUCTION: Anastrepha striata Schiner (1868: 264), is one of the most common species of fruit flies throughout most of its range. It, however, has not acquired a well established common name as have others such as the Mexican, Caribbean, and Mediterranean fruit fly. This probably is because it is not considered to be of primary economic importance, although it often is abundant and may be highly destructive to dooryard plantings of some tropical fruits.

DISTRIBUTION: This fruit fly ranges from southern Texas, Mexico, Central America, south to Peru and Brasil. Its type locality is recorded as "South America".

HOSTS: Guava, Psidium guajava L., is the preferred food host. Others include spicewood, Psidium sartorianum (Berg) Ndzu.; mango, Mangifera indica L.; Spondias sp., near hog plum or mombin, Spondias mombin L.; and seed pods of cassava, Manihot esculenta Crantz. This fruit fly has been reared in the laboratory from Surinam cherry or pitanga, Eugenia uniflora L., and sapodilla, Manilkara zapota (L.) Van Royen.

IDENTIFICATION: Larva a typical, pale yellowish-white fruit fly maggot, cylindrical in shape, with inconspicuous head and 11 body segments which are not clearly separable into thoracic and abdominal regions (fig. 1). Head a compound structure appearing as a single small segment with no definite head capsule. Oral cavity composed of a longitudinal cavity which contains 2 black mouth hooks that move up and down. Outer portions of hooks protrude from preoral cavity, and bases articulate with pharyngeal skeleton (fig.2). Shape of hooks and form of pharyngeal skeleton provide useful identification characters, as do buccal carinae. A. striata has 8-9 buccal carinae (fig. 3). The 2 anterior spiracles, located laterally at base of first body segment behind head, are modified ends of tracheae divided into small tubules or digits. Anterior spiracles are small and asymmetrical in shape, anterior margin of each, in A. striata, bearing 13-17 tubules arranged in a transverse row with median indentation as seen in profile (fig. 3). Caudal segment possesses pair of posterior spiracles, each with 3 long spiracular openings called "slits". Length, width, and position of these are useful characters in separating species. Posterior spiracular entrances of A. striata about 5 times longer than wide; posterior spiracular hairs numerous and slender (fig. 4a, 4b). Caudal segment may contain tubercles or papillules which often are indistinct. Presence, absence, size, position, and number of these tubercles may be useful in identification of fruit fly larvae. A. striata has 4 small caudal papillules above and below posterior spiracles. Caudal papillules of A. striata below posterior spiracles usually minute or apparently absent or arranged in a transverse row (fig. 5), in contrast, for example, to those of the Mexican fruit fly, Anastrepha ludens (Loew), which are arranged in 2 rows, a lateral pair well ventrad of mesal pair. Anal lobes of A. striata bifid (fig. 6). Full-grown larva 9-10 mm in length and approximately 2 mm in diameter.

Adult fruit fly rather small to medium sized; yellow brown, thorax patterned with black (fig. 7). Length of mesonotum 2.45-3.57 mm. Wing 5.9-7.7 mm long, bands yellow brown; costal and S bands touching on vein R_{4+5} and usually again just anterior to vein R_{2+3} , leaving a small hyaline spot in cell R_3 ; V band complete, separated from S band, outer arm narrow (fig. 8). Female terminalia: ovipositor sheath 2.6-2.9 mm long, stout, tapering posteriorly, spiracles 1.05 mm from base. Rasper well developed, hooks elongate, slender, in 4 or 5 rows. Ovipositor 2.0-2.15 mm long, stout, tip broad and blunt without distinct serrations (fig. 9); shaft slightly broadened at base. Male terminalia: tergal ratio about 1.19; claspers about 0.44 mm long, flattened, posterior surface with a distinct carina from near base to apex of teeth; lateral margin beyond teeth convex, carinate; extreme apex narrow, abruptly turned posteriorly; teeth about at middle. The

1/ Contribution No. 552, Bureau of Entomology

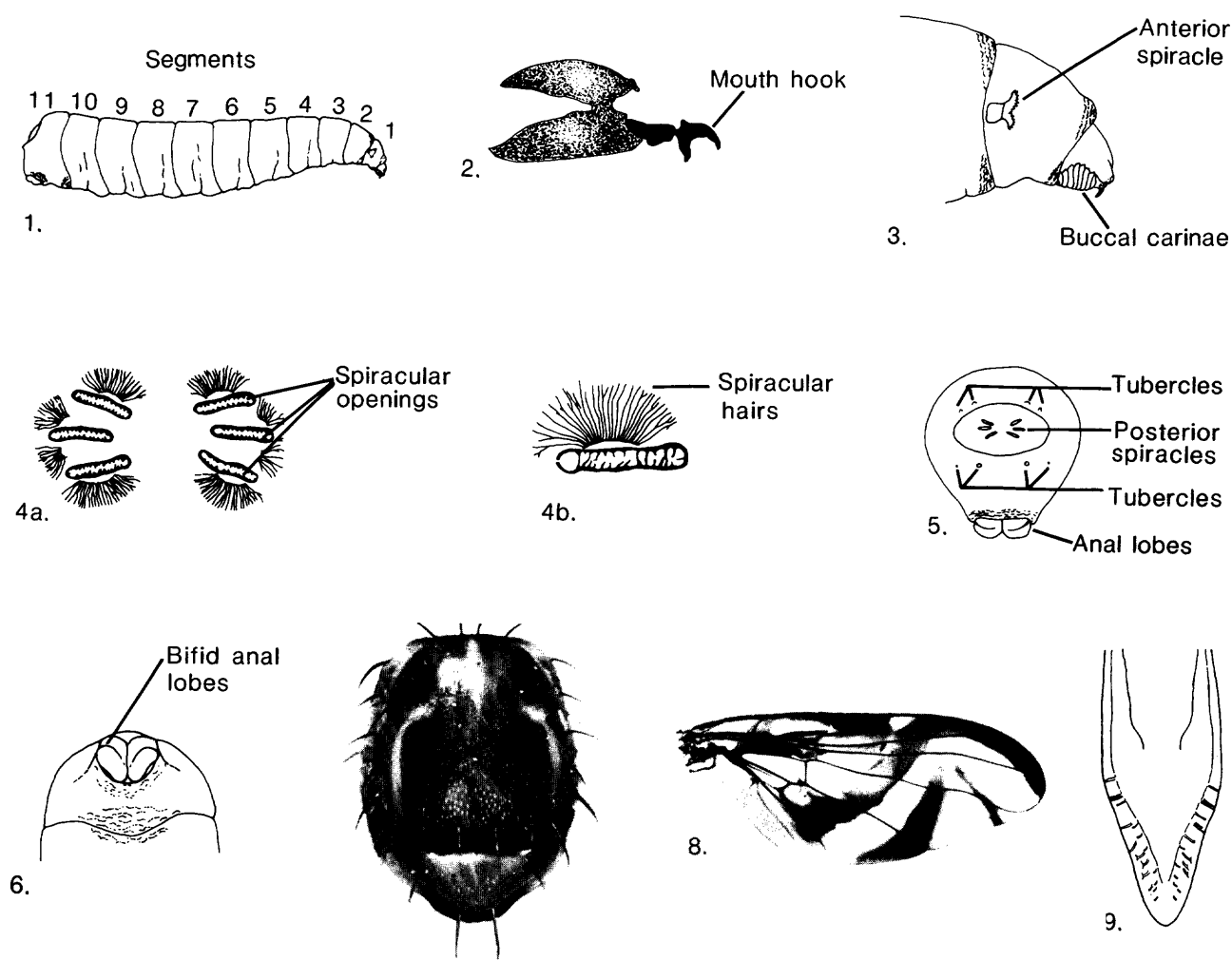
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only species with thoracic pattern and wing pattern closely resembling this species is Anastrepha bistrigata Bezzi. Lateral half of brown stripe on mesoscutum from transverse suture to scutellum denuded in A. striata; brown stripe wholly setose in A. bistrigata.

SURVEY AND DETECTION: Larvae can be collected from infested fruit, are very difficult to identify except when raised to adults, and tend to flex and jump up to 25 mm when mature. For larval preservation, kill in boiling water, place in 50% alcohol for 2 days, then to 75% isopropyl alcohol. Adults usually are collected by stickyboard and baited traps.

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Figures: 1. Anastrepha striata third instar larva, lateral view; 2. Pharyngeal skeleton and mouth hooks, lateral view; 3. Head, lateral view, showing buccal carinae and anterior spiracle; 4a. Posterior spiracles; 4b. Posterior spiracle with spiracular hairs above; 5. Posterior extremity of third instar larva; 6. Posterior extremity, ventral view; 7. Thorax, dorsal view; 8. Wing; 9. Ovipositor of adult female.