



UNIVERSITY OF
FLORIDA

IFAS EXTENSION

Schoepfia Fruit Fly, *Anastrepha interrupta* Stone (Insecta: Diptera: Tephritidae)¹

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Introduction

The schoepfia fruit fly, *Anastrepha interrupta* Stone, is native to southern Florida and one of six *Anastrepha* species which occur in or have been established in Florida at some time. The species was described from southern Florida (Stone 1942) and is thus far known only from coastal counties of south-central Florida to Key West. The *schoepfia* fruit fly has not been found on any economic fruits and is only known to feed on fruit of *Schoepfia chrysophylloides* (A. Rich.) Planch. (Olacaceae) (Weems 1967).

While populations of *interrupta* fluctuate greatly in different years and at different times of the year, this is the most common of the so-called native species, and it has been taken by traps in every month of the year. Only the Caribbean fruit fly, *Anastrepha suspensa* (Loew), believed to be a recent re-introduction into Florida, is more abundant and widespread in Florida.

Distribution

Southern Florida (counties: Martin, St. Lucie, Brevard, Palm Beach, Broward, Collier, Lee, Dade, and Monroe, including Key West). The type locality is Jensen, Florida.

Life History

The life history of *Anastrepha interrupta* has not been ascertained, although adults have been reared several times from the fruit of *Schoepfia chrysophylloides*, a plant indigenous to southern Florida.

Identification

Small yellowish fruit fly, approximately the size of a house fly, with rather long, patterned wings. Except for *A. suspensa*, *A. interrupta* may be distinguished readily from other members of the genus which occur in Florida by the presence of a black scutoscuteellar spot.

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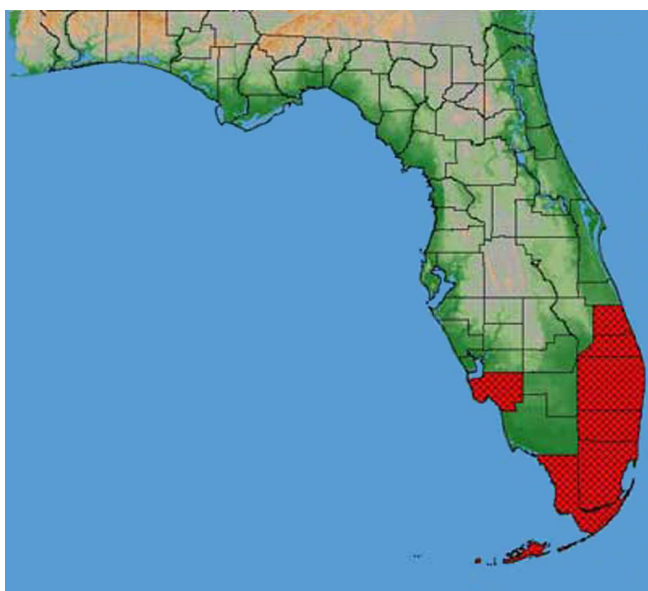


Figure 1. Distribution in Florida of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: G.J. Steck and B.D. Sutton, Division of Plant Industry

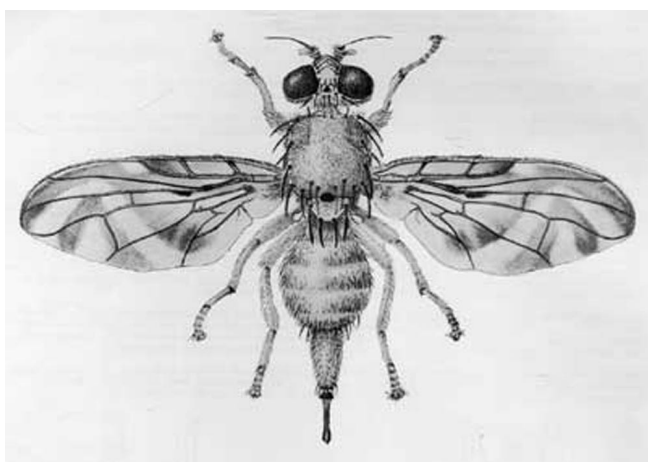


Figure 2. Adult female schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

It may be distinguished from *suspensa* by the shape of the ovipositor of the female. The tip of the ovipositor of *interrupta* is short and broad, with many fine serrations, whereas that of *suspensa* is long and tapering, with larger, rounded serrations occupying the apical two-thirds of the tip.

The thoracic spines of *interrupta* are yellowish brown, while those of *suspensa* are dark brown to black. The wing patterns of the two species, while similar, show characteristic difference. The wing pattern of *interrupta* is mostly yellowish with much less infuscation than that of *suspensa*, and the V band is not connected at its apex with the bands on the anterior portion of the wing, whereas in *suspensa* the

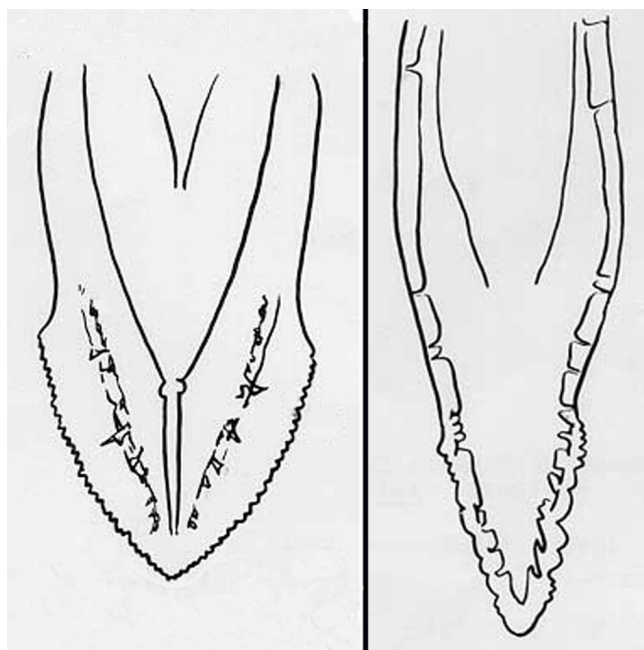


Figure 3. Comparison of the ovipositors of the schoepfia fruit fly, *Anastrepha interrupta* Stone (left), and the Caribbean fruit fly, *Anastrepha suspensa* (Loew) (right). Credits: Division of Plant Industry

V band is distinctly to narrowly connected with the S band on the anterior portion of the wing.

A. interrupta is closely related to *A. spatulata* Stone, which has been recorded from the Rio Grande Valley in Texas, Tamaulipas and Baja California in Mexico, and in Panama, but the difference in the wing pattern is so constant that there is little difficulty in distinguishing the two. Furthermore, the two species occupy widely separated ranges, having no endemic species in common.

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 7.5-9.4 mm; venter with fusiform areas on segments 2-10; anterior buccal carinae usually 14-19 in number; anterior spiracles nearly straight in lateral view but with ends somewhat curved, and with tubules averaging 10- 12 in number.

Cephalo-pharyngeal skeleton with large pointed convex mouth hook each side, with rounded dorsal lobe, and each hook about 2.5X hypostome length;

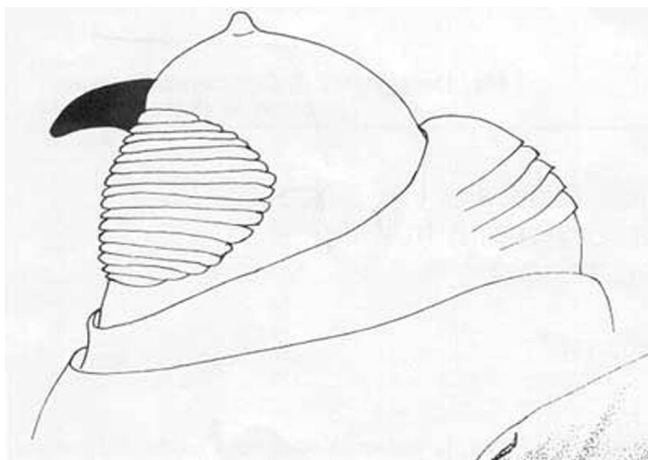


Figure 4. Larval head and buccal carinae of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

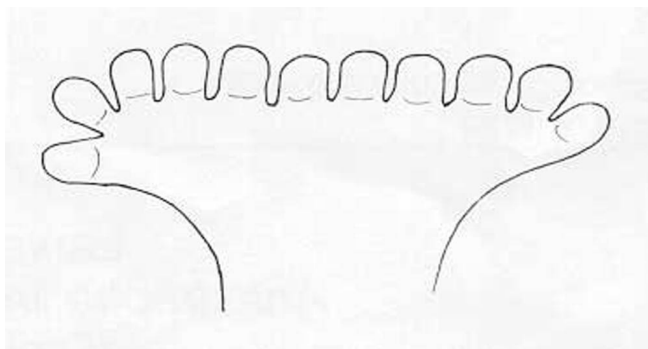


Figure 5. Larval anterior spiracles of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

hypostomium with extended elongate subhypostomium; posthypostomial 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 small posterior ray split; dorsal bridge relatively evenly sclerotized; a prominent hood on pharyngeal plate.

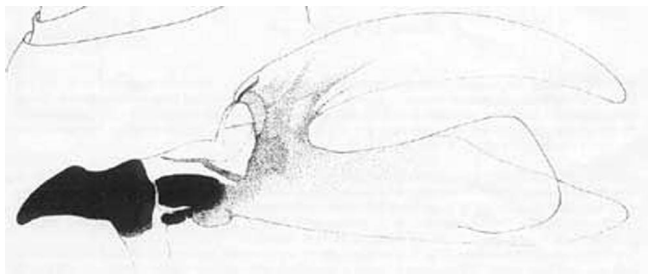


Figure 6. Larval cephalo-pharyngeal skeleton (left side) of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

Caudal end with paired dorsal papillules (D1 and D2) angled about 45 degrees from each spiracular plate; intermediate papillules 4 in number, with I1-2 in a nearly equidistant triangle with I4, and I3 distant dorso-laterally; L1 on dorso-lateral edge of caudal end; V1 about equidistant from I4 and anal lobes; posterior spiracles as 3 elongated peritremes (length = 4X width) on each spiracular-plate, with dorsal 2 peritremes angled to center from dorsal direction and remaining peritreme angled from venter; interspiracular processes (hairs) relatively few in number, at 4 sites on each plate, and tips sometimes bifurcate to trifurcate; anal lobes entire.

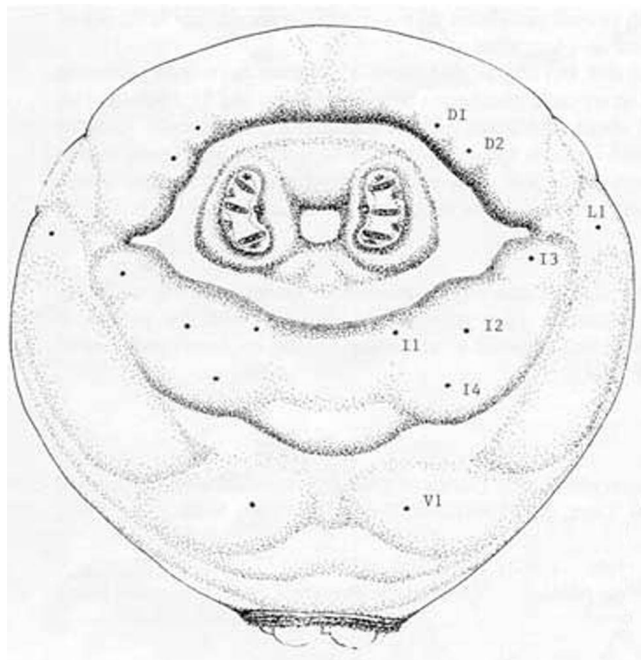


Figure 7. Caudal end of the last instar larva of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

The schoepfia fruit fly larva is particularly distinctive in relation to known *Anastrepha* larvae by the prominent depression of the entire caudal spiracular plate arrangement, together with the pattern of papillules, particularly the four intermediate pairs; This can be compared to an earlier circular on the Mexican fruit fly, *Anastrepha ludens* (Loew), and the Caribbean fruit fly, *Anastrepha suspensa* (Loew) (Heppner 1984).

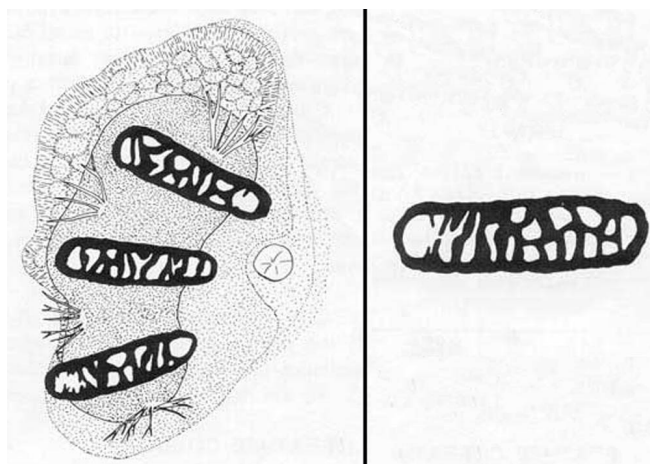


Figure 8. Posterior spiracles (left side) of the schoepfia fruit fly, *Anastrepha interrupta* Stone, with details of one peritreme. Credits: Division of Plant Industry

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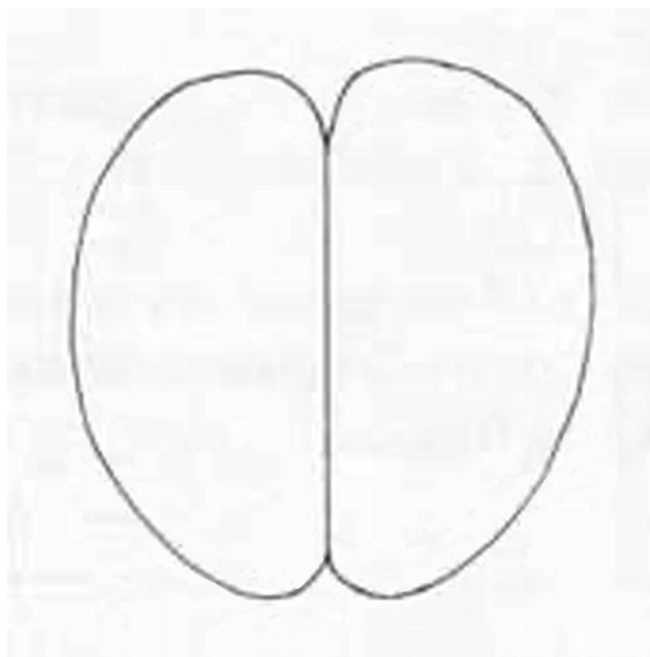


Figure 9. Larval anal lobes of the schoepfia fruit fly, *Anastrepha interrupta* Stone. Credits: Division of Plant Industry

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