

Anastrepha grandis (Macquart)
(Diptera: Tephritidae)¹

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SYNONYMS: *Anastrepha schineri* Hendel, *Anastrepha latifasciata* Hering.

INTRODUCTION: *Anastrepha grandis* (Macquart) (1846: 227) is one of 155 species of *Anastrepha* known to date. This fruit fly, which exists in several Central and South American countries, attacks watermelon and other fruits of the family Cucurbitaceae. Together with *Anastrepha consobrina* (Loew) and *Anastrepha pseudoparallela* (Loew), it also attacks the passion fruit. Once a pest of minor to moderate importance generally, in recent years it has become a rather important pest. The pest status differs in each country and has changed in the last decade. This species would seem to be potentially of economic importance in Florida and southern Texas should it ever be introduced there. It has been intercepted in the United States in pumpkin from Argentina and Brasil, and one adult was found in banana debris from Panama.

DISTRIBUTION: Argentina, Bolivia, Brasil, Colombia (Type locality: "New Grenada"), Panama, Paraguay, and Venezuela.

HOSTS: *Citrullus lanatus* (Thunberg) Matsumura & Nakai (watermelon), *Cucumis sativus* Linnaeus (cucumber), *Cucurbita maxima* Duchesne (autumn and winter squash, pumpkin), *Cucurbita pepo* Linnaeus (summer and autumn pumpkin and squash, gourd, marrow), other cucurbits, and *Passiflora alata* Dryander. The record of rearing from oranges (Greene, 1934) is erroneous. Immature fruits of cucurbits apparently are preferred, but mature or nearly mature fruits of some varieties are attacked occasionally.

IDENTIFICATION: Rather large, yellow-brown, with yellow and dark-brown markings (fig. 1, 2). Mesonotum 3.3-4.0 mm long, yellow-brown, with humerus, median stripe widening to include acrostichal bristles but not reaching scutellum, lateral stripes from just before transverse suture to side of scutellum, stripe below notopleuron, metapleuron, and scutellum except extreme base yellow; a sublateral stripe from level of humeral bristle to scutellum, broken at transverse suture, a band along scutoscuteellar suture, intensified medially, and a spot on pteropleuron dark brown; metanotum blackened laterally. Macrochaetae dark brown; pile yellowish brown. No sternopleural bristle. Wing 9.0-10.5 mm long, the bands yellow brown, rather diffuse; costal and S bands broadly connected, and no distinct hyaline spot anterior to vein R₄₊₅; distal arm of V band absent, the proximal arm not joining S band. Female terminalia: Ovipositor sheath 5.8-6.2 mm long, tapering posteriorly to apical third, which is distinctly depressed and broadened; in profile the sheath is distinctly concave dorsally on median half and concave ventrally on apical third. Rasper well developed, of slender, curved hooks in 5 or 6 rows (fig. 3a). Ovipositor slightly longer than length of ovipositor sheath, being somewhat curved dorsoventrally to permit fitting into sheath; tip long and slender, without serrations; extreme base slightly widened (fig. 3b). (Stone, 1942).

Steyskal (1977) distinguished *A. grandis* from the other 4 species of the Grandis group as follows: Vein R₃ somewhat undulant; metanotum yellow (*A. bezzii* Lima and *A. balloui* Stone); vein R₃ not undulant; metanotum marked with black (*A. atrigona* Hendel, *A. shannoni* Stone, and *A. grandis* (Macquart)). Mesonotum not striped with black (*A. atrigona*); mesoscutum with black stripes (*A. shannoni* and *A. grandis*). Mesoscutum and pleura largely black, wing with pattern darkened (*A. shannoni*); mesoscutum and pleura with little black, wing pattern very little darkened (*A. grandis*).

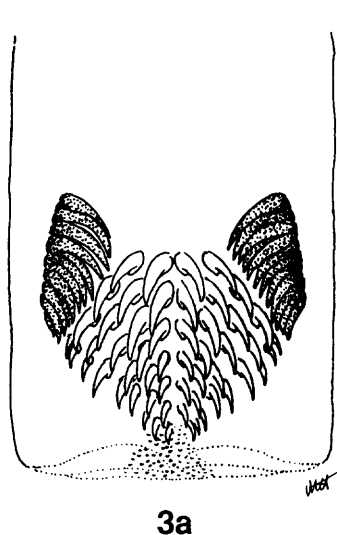
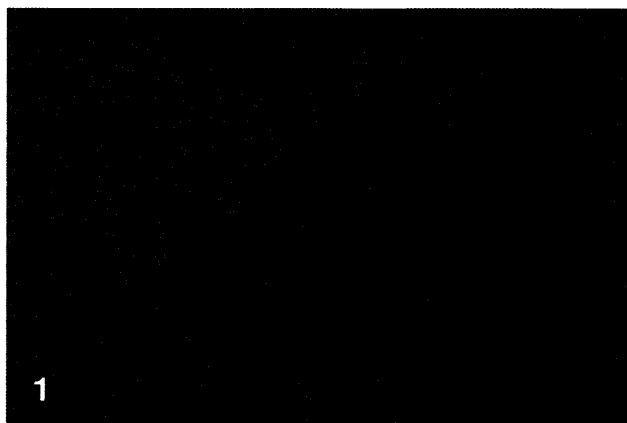
SURVEY AND DETECTION: Larvae can be collected from infested fruit and are very difficult to identify to species except when reared to adults. For best larval preservation, kill in boiling water, place in 50% isopropyl alcohol for 2 days, then in 75% isopropyl alcohol. Adults may be collected on stickyboard and in baited traps.

¹ Contribution No. 745, Bureau of Entomology

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Figures 1-3, *Anastrepha grandis* (Macquart). 1) female; 2) male; 3a) rasps at tip of ovipositor sheath; 3b) ovipositor of female.