



## New species and records of *Anastrepha* (Diptera: Tephritidae) from Brazil

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### Abstract

Three new species of *Anastrepha* from Brazil are described and illustrated: *A. matogrossensis* Norrbom & Uchôa (from Mato Grosso), *A. oiapoquensis* Norrbom & Uchôa (from Amapá), and *A. siculigera* Norrbom & Uchôa (from Amapá). *Anastrepha rafaeli* Norrbom & Korytkowski also is reported from the state of Tocantins.

**Key words:** fruit flies, taxonomy

### Introduction

*Anastrepha* Schiner is the most diverse genus of fruit flies (Diptera: Tephritidae) in the American tropics and subtropics with more than 230 described species (Norrbom 2004a, Norrbom & Korytkowski 2009), more than 100 of which are known from Brazil (Zucchi 2000b, Zucchi 2008, Uchôa & Nicácio 2010). *Anastrepha* is also the most economically important genus of fruit flies in this region, including a number of major fruit pests (Norrbom 2004b). Despite its importance, many species remain undescribed, and the native host plant relationships and distributions of many species are poorly known. In this paper we describe three species that were discovered in a series of surveys of the species of *Anastrepha* and their host plants and parasitoid wasps in the Brazilian state of Tocantins (Bomfim *et al.* 2007a, b), and in the states of Mato Grosso and Amapá by the junior author and students. These species are described here to make their names available for future analyses of the data from these studies and for a forthcoming interactive identification system and key for the genus.

### Material and methods

We follow the morphological terminology of McAlpine (1981) and White *et al.* (1999). The names for the wing bands follow Stone (1942) and are shown in Figure 5. Wing length was measured from the base of the costa to the wing apex in cell  $r_{4+5}$ ; wing width was measured at the broadest part, distal to the apex of vein  $R_1$  to the margin of cell  $cu_1$ . The position of the apex of vein  $R_1$  is the ratio of the distance from the base of the costa to the apex of vein  $R_1$  divided by wing length. The width of cell  $r_{4+5}$  at the level of dm-cu was measured on a line directly anterior to the junction of vein M and dm-cu. Its apical width was measured on a line from the apex of vein  $R_{4+5}$  and the junction of vein M and the wing margin. The width of the distal part of the S-band was measured perpendicular to the band at the apex of vein  $R_{2+3}$ , and the width of cell  $r_{2+3}$  was measured along the same line. Oviscape length was measured medially on the ventral side from the concavity in the base to the apex, including the medial lobe. The length of the aculeus tip was measured ventrally from the inner (proximal) margin of the sclerotized part to the extreme apex.

Label data for all examined specimens will be made available in the New World fruit fly specimen database on the Systematic Entomology Laboratory web site (see [www.sel.barc.usda.gov:591/diptera/Tephritidae/TephIntro.html](http://www.sel.barc.usda.gov:591/diptera/Tephritidae/TephIntro.html)). A USNM barcode label was added to specimens that previously lacked a barcode label. These labels do