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# African *Dacus* (Diptera: Tephritidae); New Species and Data, with Particular Reference to the Tel Aviv University Collection

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## Abstract

Seventeen new species are described: *Dacus abruptus, D. acutus, D. albiseta, D. brunnalis, D. insolitus, D. kaplanae, D. kurrensis, D. luteovittatus, D. magnificus, D. pseudapostata, D. pseudomirificus, D. senegalensis, D. transversalis, D. velutifrons, D. vestigivittatus, D. xanthinus, D. yaromi*. Two species have changed status: *D. devure* Hancock is newly placed as a synonym of *D. africanus* Adams; *D. mochii* Bezzi stat.rev. is removed from synonymy with *D. annulatus* Becker and redescribed. Two subgeneric changes are made: *D. nairobensis* White and *D. seguyi* (Munro) are placed in sg. *Lophodacus* [both from sg. *Didacus*]. New descriptive data are presented for several species; these include first known male of *D. gabonensis* White, *D. parvimaculatus* White, *D. seguyi* and *D. semisphaereus* Becker; first known female of *D. blepharogaster* Bezzi, *D. merzi* White and *D. nairobensis* White. Revised host data are presented for *Bactrocera mesomelas* (Bezzi), and new male lure data for *D. congoensis* White, *D. fuscovittatus* Graham and *D. pleuralis* Collart. New country records are listed for a further sixteen species.

**Key words:** Tephritidae, Dacini, Dacina, *Dacus*, *Bactrocera*, Africa

## Introduction

*Dacus* Fabricius and *Bactrocera* Macquart are the major genera in the subtribe Dacina, as defined by Norrbom *et al*. (1999). White (2006) described the African Dacina fauna and recognised 177 *Dacus* spp., as well as 15 *Bactrocera* spp., 4 of which are native to the Indo-Australasian regions where more than 500 species are now known. *Dacus* spp. have very restricted host plant relationships being associated with just three plant families (Apocynaceae, Cucurbitaceae and Passifloraceae) although a few species have been known to exploit intensively grown fruits from other families. In contrast the larvae of *Bactrocera* spp. develop in a wide range of host families and some are polyphagous. In Africa one species group attack the fruits of Oleaceae, and the introduced *B. cucurbitae* (Coquillett, 1899) represents the large Indo-Australasian subgenus *Zeugodacus* Hendel which are almost exclusively associated with Cucurbitaceae. Males of many species are attracted to chemical lures which can be used in survey and control (White & Elson-Harris 1992). Many *Bactrocera* spp. are attracted to methyl eugenol, e.g. the recently described *B. invadens* Drew, Tsuruta & White, a native of Sri Lanka, which was found in Kenya in 2003 and has since spread across the whole of tropical Africa (Drew *et al*. 2005). Many other *Bactrocera* and *Dacus* spp. are attracted to cue lure, e.g. *B. cucurbitae*, as are many other Cucurbitaceae associated species; one African species (*D. vertebratus* Bezzi, 1908b) is uniquely attracted to vert lure (Hancock 1985a).

Since completion of contract research on African fruit flies (Tephritidae), coordinated by Texas A&M University (White 2006), 17 new species have been recognised, as has the true status of *D. mochii* Bezzi, 1917. These are described here, increasing the known African *Dacus* fauna to 195spp. An additional Asian species of *Bactrocera* has also been found in Africa, *B. latifrons* Hendel, 1915, which is a pest of Solanaceae (Mwatawala *et al*. 2007). Most of the additional *Dacus* spp. came from a single large collection (1001 specimens, 489 block records) belonging to Tel Aviv University, Israel, which could not be fully studied within the contract period. They were therefore set aside to form the basis of this follow-up study. Notes on two species collected in the United Arab Emirates are also included here, both of which are native members of the African fauna.

The images, full locality data and an electronic version of the key to accompany White (2006) were presented on a CD-ROM included with that publication. Most of those images were processed using Auto-Montage (Anonymous 2003) and the electronic version of the 320 couplet key was presented as a spreadsheet to facilitate future updating and insertion of couplets. Those images and data have since been added to an internet site (De Meyer & White 2008). Following publication of this work, that Internet site will be further updated to include images of the new species described here; together with their locality data and a revised key of 355 couplets (the key is also available in PDF or spreadsheet form from the authors).