

Dicraeus tibialis (Macquart) (Diptera: Chloropidae) new to
New Zealand

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ABSTRACT

The chloropid fly *Dicraeus tibialis* is recorded from New Zealand and distinguished from the other New Zealand species of the family.

Keywords: Diptera, Chloropidae, *Dicraeus tibialis*, new record, New Zealand.

INTRODUCTION

The genus *Dicraeus* is recorded widely from the Old World as far east as New Guinea and the Bismarck Archipelago (Ismay 1984). Although not recorded from Australia and New Zealand (Spencer 1977), several species from Australia are now known to the author and Dr K. A. Spencer (unpublished). During a visit to New Zealand in 1986 numerous specimens of a *Dicraeus* were taken near to Christchurch. These proved indistinguishable from the Palaearctic *D. tibialis* (Macquart 1835) which is therefore recorded from New Zealand. It is presumed to be a recent introduction from Europe or North America.

Females of *Dicraeus* are known to oviposit on the seeds of grasses at the milky grain stage and the larva usually destroys the seed. They have been shown to be pests of pasture grasses in Russia (Agafonova 1962) and millet in West Africa (Deeming 1979). *Dicraeus tibialis* has been associated with the grasses *Bromus erectus* Huds., *B. inermis* Lyess. and *Helicotricon pubescens* (L.) in the Palaearctic region. Its pest status in New Zealand is unknown.

IDENTIFICATION

Dicraeus is distinguished from most other Oscinellinae (costa extending to M_{1+2} , postpronotal lobe with 1 seta) by the elongate vein R_{2+3} (Fig. 1). The 2nd costal sector (R_1 to R_{2+3}) is usually at least 2.8 times the 3rd sector R_{2+3} to R_{4+5} , though in the material studied here it varied from 2.0 to 4.2 times. This variation was noted in both New Zealand and British material. In males the ratio was smaller (mean 2.3 for British, 2.8 for New Zealand) than in females (mean 3.0 for British, 3.2 for New Zealand) but there was overlap between both sexes from both countries. Spencer (1977) provided keys to the New Zealand Chloropidae. *Dicraeus* may be distinguished from other genera by inserting the following couplet after couplet 1 of the key to genera of Oscinellinae.

- 1a. 2nd costal sector more than twice length of 3rd . . . *Dicraeus* Loew
 2nd costal sector less than twice length of 3rd 2

The following short description should be sufficient to distinguish *D. tibialis* from any further species of *Dicraeus* which may be found in New Zealand.

DESCRIPTION

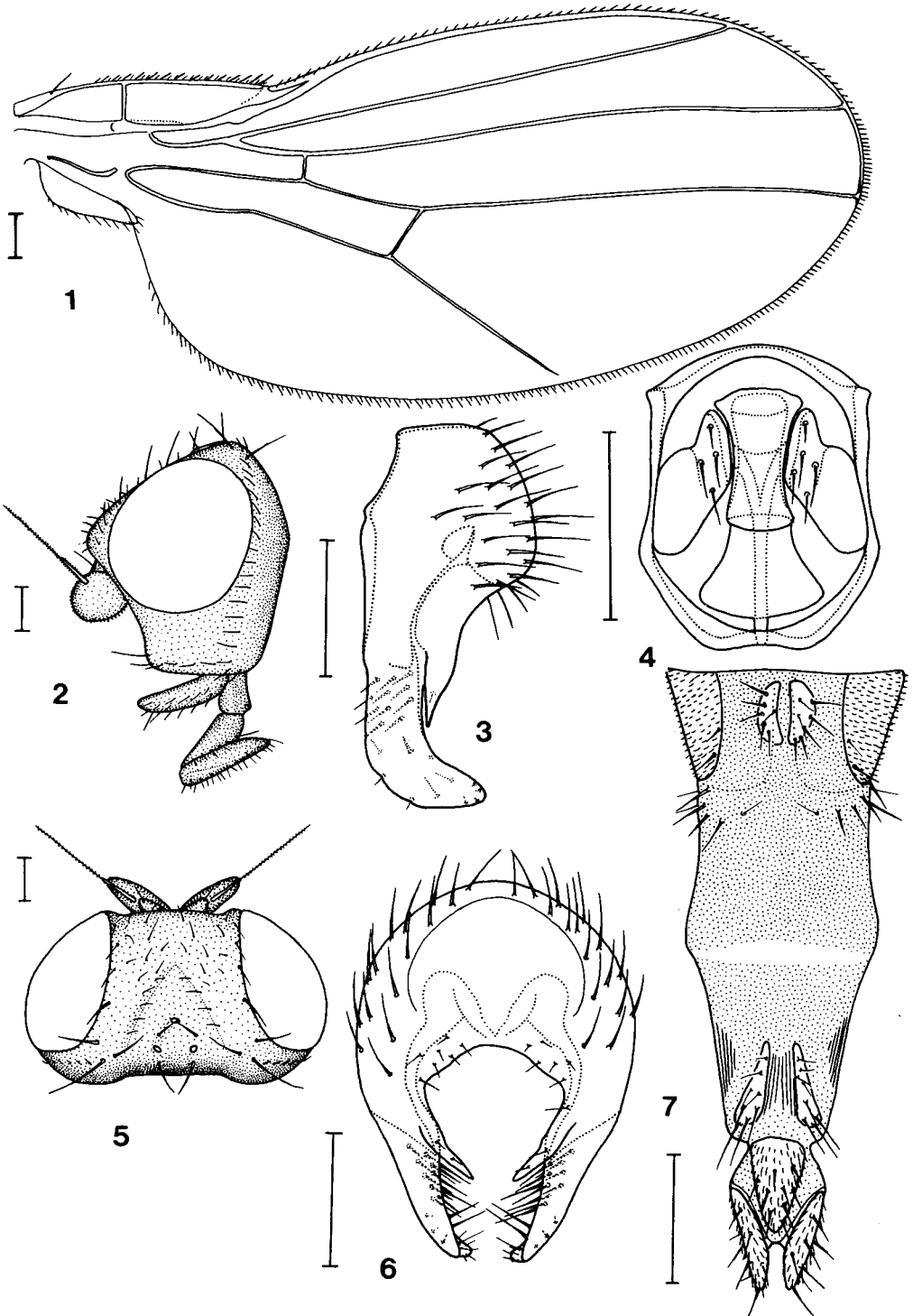
Mainly black species. Face, gena, palpus, anterior $\frac{1}{3}$ of frons, haltere yellow. First flagellomere of antenna yellow basally. Anterior tibia yellow to yellow-brown. Abdominal tergites 1 + 2 yellow to yellow-brown with lateral dark spot, tergites 3-5 yellow to yellow-brown, darker in female.

Ocellar triangle (Fig. 5) extending more than $\frac{1}{2}$ distance from anterior ocellus to anterior margin of frons, dully shining through thin dust. Gena (Fig. 2) slightly deeper than depth of 1st flagellomere. Scutum slightly more dusted than ocellar triangle. Katepisternum dusted centrally from dorsal margin to ventral angle, shining on anterior and posterior margins. Male middle femur without femoral comb. Wing as in Fig. 1, ratio of 2nd/3rd costal sectors 2.0-4.2.

Male genitalia with small epandrium (Figs. 3,6), cercus stylet-like, close to insertion of surstylus. Hypandrium as Fig. 4. Female postabdomen short (Fig. 7).

MATERIAL EXAMINED

New Zealand, South Island, 23♂♂ 9♀♀, Banks Peninsula, Diamond Harbour, grasses, 15.xi.1986, J. W. Ismay; 7♂♂ 5♀♀, Christchurch, Groynes Park, grasses, 5.xi.1986, J. W. Ismay; 1♀ Ohoka, N. Christchurch, flowers, 14.xi.1986, J. W. Ismay. Specimens have been deposited in the Entomology Collections of the DSIR Plant Protection in Auckland, the British Museum (Natural History) London, UK and the Hope Entomological Collections, University of Oxford, UK.



Figs 1-7: 1, *Dicraeus tibialis*, wing; 2, head, lateral view; 3, epandrium, lateral view; 4, hypandrium, apical view; 5, head, dorsal view; 6, epandrium, apical view; 7, female postabdomen, ventral view. Scale line, 0.1 mm.

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