

AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Hardy, G. H., 1922. A description of *Heterometopia argentea* Macquart (Diptera Dexiidae). *Records of the Australian Museum* 13(5): 198–200, plate xxxvii. [15 March 1922].

doi:10.3853/j.0067-1975.13.1922.872

ISSN 0067-1975

Published by the Australian Museum, Sydney

nature culture **discover**

Australian Museum science is freely accessible online at
www.australianmuseum.net.au/publications/
6 College Street, Sydney NSW 2010, Australia



A DESCRIPTION OF *HETEROMETOPIA ARGENTEA*
MACQUART (*DIPTERA DEXIIDÆ*).

BY

G. H. HARDY.

(Plate xxxvii.)

This paper is the first of a series in which it is proposed to describe, more thoroughly than has hitherto been done, those Australian species of the Calyptrata which are the typical forms of various genera proposed by the earlier authors such as Macquart and Walker.

Considerable difficulty has been experienced in determining the genera and species that were described by most of these earlier authors, partly owing to the inadequate descriptions, and partly to the lack of the complete literature dealing with the subject; nevertheless a certain amount of recent and useful information has been and is still being published upon this group of Diptera, and this, together with the literature available at the present time, has made it possible for me to ascertain the identity of various species.

The Dexid described here was originally placed under the Tachinidæ, and besides being typical of its genus it is the origin of a curious phenomenon which forms a subject matter under the notes. Moreover the sexes are determined, and the female is now described for the first time, unless perchance it has been described previously under another name.

HETEROMETOPIA ARGENTEA Macquart.

(Plate xxxvii.)

Heterometopia argentea Macquart, Dipt. Exot. suppl. 1, 1846, p. 170; Pl. xvi., fig. 1.

Colours.—Seen from the front the whole dorsal surface of the male appears to be silvery; this is due to a tomentum which is seen at its best in this position. As the insect is turned to some other position the ground colours become apparent, and are seen at their best when viewed from the rear. There is less silvery tomentum in the female, and the ground colours can be seen at any angle.

In the male the head appears to contain brownish, yellowish, and black colours; the frontal suture is closed. In the female the head is mostly brownish, and the frontal suture is open and black. The eyes are black. The antennæ are black, with the basal joints and the first segment of the arista brown. In the male the thorax and scutellum are black; in the female these areas are mostly black, but more or less covered with a white tomentum. Anteriorly to the transverse suture the female has the anterior border and sides, and also two median stripes, covered with a white tomentum, which further covers the apical quarter of the thorax and the whole of the scutellum.

In the male the abdomen is brown, with a central dorsal black stripe which expands on and covers the apical half of the third segment; the fourth segment is black and nearly completely covered dorsally with a yellow tomentum. In the female the abdomen dorsally is black with white tomentum on the incisions of the segments; nearly the whole of the fourth segment is covered with a yellow tomentum; this tomentum extends to the fourth segment of the otherwise black venter.

All hairs, bristles, and legs are black.

Bristles.—The head contains two pairs of vertical bristles; the outer divergent pair are smaller than the inner convergent pair. One very slender pair of postvertical convergent bristles; two pairs of ocellar, the posterior erect and small, the anterior strong and proclinate. In the male there is only one pair of reclinate-divergent frontal bristles; the female has three additional pairs, of which the middle are proclinate and the others proclinate-divergent. About four pairs of cruciate bristles. Below each vibrissa there is a row of about ten convergent-proclinate bristles near the oral margin. Postorbital bristles very small.

The dorsal bristles of the thorax are disposed on each side of the median line as follows:—Three humeral; one strong (central) and two weak posthumeral; two notopleural; one presutural; two supra-alar; two intra-alar; two post-alar; six dorso-central; one apical acrostichal. The other acrostichal bristles are mostly obsolete, but if present are very small.

The ventral bristles of the thorax are disposed on each side as follows:—Three or four pro-pleural; a row of seven meso-pleural situated on the border nearest the insertion of the wings; three sterno-pleural; three ptero-pleural, small, situated immediately above and forming part of the tuft of hairs below the insertion of the wings; about six hypo-pleural.

The scutellum contains three pairs of long bristles—one lateral near the base, reclinate; one lateral in the centre, divergent; and one apical, cruciate. Sometimes there is also a small pair placed widely apart on the dorsum.

The abdomen contains a pair of lateral bristles on the apical margin of the first segment, one lateral and one median pair on the apical margin of the second segment, about six dorsal pairs of marginal bristles on the third and fourth segments, and about as many ventral.

Length.—9 mm.

Hab.—Tasmania: Dunalley, seven males and six females; Hobart, one male; Geeveston, one male; Launceston, one male; October to December. New South Wales: Mount Kosciusko, one male, taken by Dr. E. W. Ferguson.

Types.—The specimen from which the male description is taken and the allotypic female are in the Australian Museum.

Notes.—About the middle of November, 1917, in a valley at Dunalley, Tasmania, I noticed the glimmer of a male specimen in a crack of a very much charred dead tree, from which after diligent search another specimen was taken. In the same locality a day later my wife took a series containing both sexes from the under side of a fallen tree lying well above the ground. Other specimens have been taken in widely separated places prior to this, but invariably there were males only.

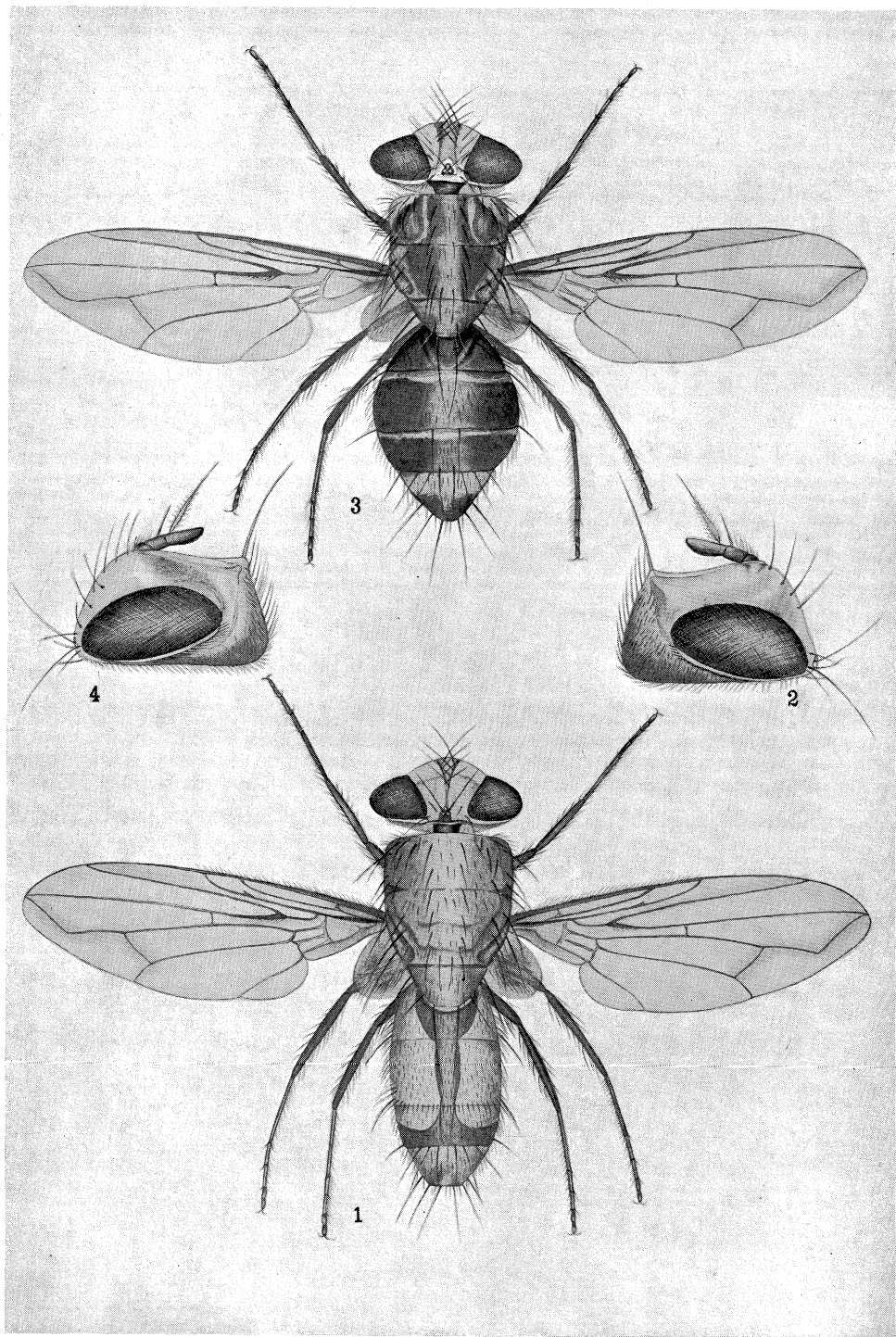
A curious phenomenon that has excited the interest of most collectors in Tasmania is to be found in the sudden disappearance of the male of this fly when in flight. A specimen may be seen approaching as a silvery white spot, which suddenly disappears. This apparition may be observed several times a day, and only with difficulty can it be netted. Now if the insect be slowly turned round it will be noticed that when seen from the front the other colours are completely obliterated by a silvery sheen, but viewed from the sides or rear the thorax is black and the abdomen is brown with a dark central stripe. It is evident, therefore, that the silvery spot approaching is the insect advancing with the head towards the observer, and a more conspicuous insect is not to be seen in the bush, but immediately the insect turns the silver colour is lost, and the fly becomes invisible to the eye, which cannot follow the rapid change in colour.

EXPLANATION OF PLATE XXXVII.

Heterometopia argentea Macquart.

- Fig. 1. The male.
,, 2. The side view of the head of the male.
,, 3. The female.
,, 4. The side view of the head of the female.
-

NOTE.—Figs. 2 and 4 were inadvertently drawn to face the same direction as figs. 1 and 3.



D. J. FARRELL, del.