

Two new species of **Platypalpus** Macquart  
(Diptera, Empidoidea, Hybotidae)  
from Papua New Guinea\*

by P. GROOTAERT\*\*

The genus *Platypalpus* is a very large genus and well-represented in the northern, temperate hemisphere. It is rather rare in tropical areas where its niche seems to be taken by the numerous *Drapetis* (*Elaphropeza*) species.

To the author's knowledge, only *P. chionochoeta* BEZZI, 1904, is known from Papua New Guinea. According to the description, it is a yellow species belonging to the *P. albiseta*-group.

The two presently described species were caught during a two month stay in the lowland of the Madang province at the North-East coast of Papua New Guinea. A third species, belonging to the *P. albiseta*-group, was caught in the mountains near Wau but cannot be described since the antennae were broken.

Although the present new species are related to the primitive *albiseta*-group (COLLIN, 1961; CHVALA, 1975), they represent a different and new species group which is called the *isabellae*-group. It has still some plesiomorphic characteristics comparable to the *albiseta*-group but it exhibits a number of apomorphisms such as the very small basal cells, the absence of an anal lobe on the wings, the loss of the anal cell and the spiny protuberances on the hypopygial plates.

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**Platypalpus isabellae** sp. n. (fig. 1-5)*Diagnosis:*

A small, shining black species with a pair of short vertical bristles and black antennae with a long white arista. A tiny black, pointed spur present on middle tibiae; middle femora with long posteroventral bristles. Basal cells in wing very small. Anal vein only faintly indicated. All coxae blackish-brown. Hypandrium with two strong recurved spines.

*Male:*

Head black, rather small and globular. Frons shining black, narrow, in front narrower than front ocellus. Its posterior half gently widening. A pair of short anterior ocellar bristles. A pair of short, pale brownish vertical bristles adpressed to vertex. Occiput with a subshining greyish patch in middle, eyemargins shining, bristles short and pale. Proboscis short, a quarter to a third of eye height, pale brownish. Palpi short, brown in ground-colour, with long brownish hairs. Antennae black with a long whitish arista. Third segment about three times as long as deep, elongate pyriform with long ventral hairs (fig. 2). Arista almost three times as long as third antennal segment.

Thorax shining black, except for the prothorax, a slightly dusted band over humeri and notopleural depression and the dusted posterior third of the mesonotum. Scutellum shining black. Mesonotum almost bare. The fine hairs brownish. Some short pubescence on humeri, one hair represents perhaps a humeral bristle. No acrostichals. Anterior dorsocentrals uniserial, short and inconspicuous. On two thirds from the head, a pair of long dark dorsocentrals, directed forwards, followed by a pair of smaller ones, directed inwards. Two notopleurals, upper one long, lower one short. A pair of long scutellars with a fine hair near each at the outside.

Legs yellowish to brown. All coxae blackish-brown. Trochanters yellow. Front femora yellowish-brown on basal two thirds, apically darkened. Middle and hind femora yellow on basal half, blackish on apical half. All tibiae brown, tarsi blackish-brown. Front femora rather slender, slightly thickened on basal third, less deep than middle femora. A double row of long yellowish ventral bristles present: the longest at the base as long as femur is

deep. No posteroventrals present. A black anterior bristle, longer than femur is deep, on a quarter from tip. Front tibiae slender with short pubescence. Middle femora only slightly thickened (fig. 1) with the usual double row of short, black spines and

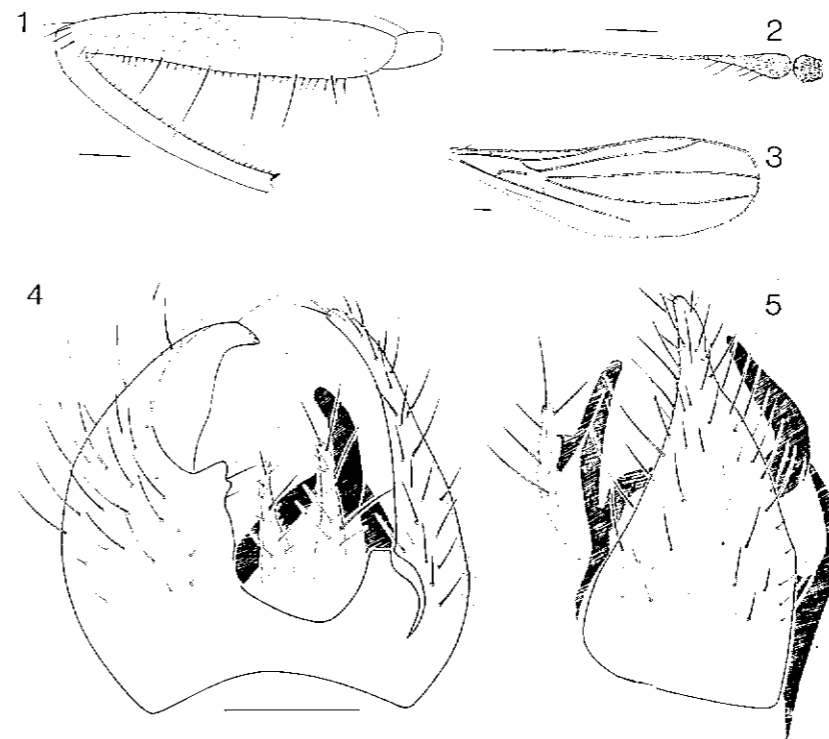


FIG. 1-5. — *Platypalpus isabellae* sp. n. paratype male: 1 middle femur and tibia in posterior view; 2 antenna; 3 wing; 4 perianthrium; 5 left perianthial lamella. Scale 0.1 mm.

with six, black posteroventrals, longer than femur is deep. A long black, anterior bristle on a third from the tip, directed towards tip. A very short, black, pointed spur on mid tibiae. Hind femora and tibiae slender with inconspicuous bristles.

Wings brownish with brown veins (fig. 3). Basal cells very small; the crossveins contiguous. No vein closing anal cell. Anal vein faintly indicated by a brownish line. No anal lobe. Halteres white, squamulae whitish with a dark hair.

Abdomen brownish-black, probably not dusted; with short pale hairs. The hypopygium is illustrated in figs 4 and 5. Perianthial

lamellae covered with pale, brownish hairs. Cerci small and slender, enclosed in the lamellae. Proctiger with very large, black spines. Hypandrium with a strong basal and a preapical recurved spine.

*Length* : body : 1.8 - 1.9 mm ; wing : 1.7 - 1.8 mm.

*Female* unknown.

*Derivatio nominis* :

The present species is dedicated to my wife, Dr. Isabella Van de Velde.

*Material*.

Holotype male, Papua New Guinea, Madang province, Apingan (type loc.), 15 June 1982 (alt. 120 m), leg. P. GROOTAERT ; sample no. 1320 ; conserved in alcohol ; hypopygium in slide n° 84.02.15.01 ; wing, antenna, middle leg in slide n° 84.02.15.02.

Paratype male, Papua New Guinea, Madang province, Laing Island, 16 June 1982 (alt. 1 m), leg. P. GROOTAERT.

***Platypalpus awarensis* sp. n.** (fig. 6-10)

*Diagnosis* :

A small, shining black species with a pair of short vertical bristles and black antennae with a long white arista. A tiny black pointed spur present on middle tibiae and long posteroventral bristles on middle femora. Basal cells in wings very small, no anal vein. All coxae pale yellowish. Hypandrium without spines.

*Holotype male* :

Head black, small and globular. Frons narrow, in anterior half as deep as front ocellus, shining black. Face almost linear. A pair of fine anterior ocellar bristles, as long as second antennal segment. A pair of pale vertical bristles, adpressed to the vertex, shorter than the second antennal segment. Vertex polished black. Occiput with very short, dark bristles. Proboscis very short (completely retracted in the single male). Palpi small, brown with some long pale bristles. Antennae black with a white arista. Basal two antennal segments black ; the third segment brownish-black. Ven-

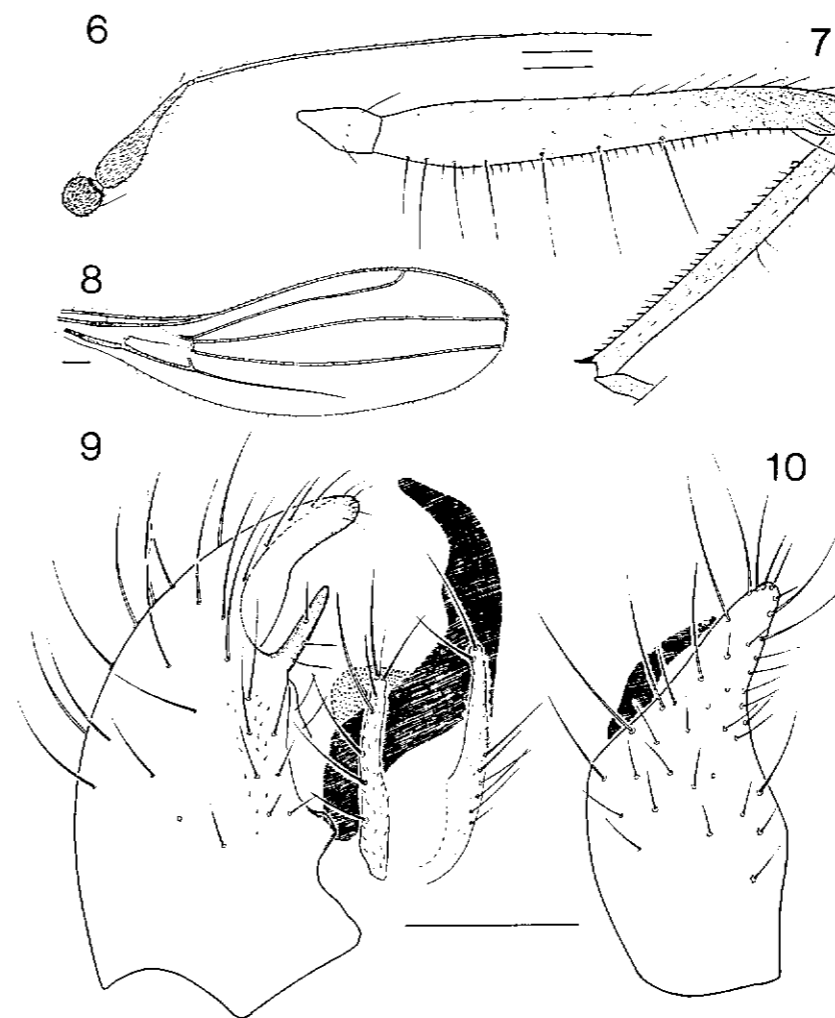


FIG. 6-10. — *Platypalpus awarensis* sp. n. holotype male :  
6 antenna ; 7 middle femur and tibia in posterior view ; 8 wing ;  
9 right periandrial lamella ; 10 left lamella. Scale 0.1 mm.

tral bristles on second segment as long as second segment. Third antennal segment pyriform on basal half with a narrow neck (fig. 6). Arista twice as long as third segment.

Thorax shining black, scutellum dusted. Mesonotum almost bare, except for a few very short bristles. Humeri indistinct; no humeral bristle differentiated but three very short hairs present. No acrostichals. Two pairs of very short dorsocentrals in anterior half, none posteriorly. Pubescence in notopleural depression very short (perhaps a few hairs). Upper notopleural brown, short; lower one indistinct. A pair of brownish scutellars with a fine hair near each at the outside.

Legs yellowish-brown. Four posterior coxae and trochanters pale yellow. All femora yellowish-brown with apical third darkened. Front coxae, all tibiae and tarsi brownish. Front femora slender, as deep as middle femora. A double row of rather short, pale ventral bristles on front femora: the bristles in the anterior row, half as long as femur is deep; those in the posterior row still shorter except for a long basal bristle in each row which is as long as femur is deep. A brown anteroventral bristle, half as long as femur is deep, on two thirds from base. Pubescence on front tibiae and tarsi not very dense. Mid femora somewhat thickened in basal third, further slender (fig. 7). A brown, but fine anterior bristle, as long as femur is deep, on two thirds from base. Six brownish posteroventral bristles, twice as long as femur is deep. Middle tibiae with a fine, very short, black pointed spur. Hind femora and tibiae slender. Pubescence on hind femora dense and pale.

Wings brownish, with brown veins. Basal cells very small (fig. 8). No anal lobe and no indication of an anal vein. Halteres with a white knob, stalk brown. Squamulae small, brown.

Abdomen brownish on basal three terga, following terga paler. Venter rather pale brown. Hypopygium black. Bristles on terga not very dense, short, brownish. Hypopygium as illustrated in figs 9 and 10; Hypandrial plate without spines. A very stout spur on epiproct.

*Length*: body: 1.9 mm; wing: 1.9 mm.

*Female*: unknown.

#### *Material*:

Holotype male: Papua New Guinea, Madang province, Awar (type loc., alt. 1 m), 21 June 1982, leg. P. GROOTAERT, sample n° 1409, conserved in alcohol; hypopygium in slide n° 84.02.15.03, wing and antenna in slide n° 84.02.15.04, middle leg in slide n° 84.02.15.05.

#### **Discussion**

Both new species are placed in a new species-group inside the genus *Platypalpus*: the *isabellae*-group. This group represents numerous plesiomorphic characteristics. The head is small, globular with the antennae at the middle of the head in profile. The face is linear and the frons very narrow. There is a single pair of short but distinct vertical bristles adpressed to the vertex. The proboscis is very short. The mesonotum is almost completely shining black. The humeral calli are distinct but small as in some *albiseta*-species. There is no humeral bristle. Further, the legs are quite slender although the middle femora bear long posteroventral bristles and there is a tiny, pointed apical spur on the middle tibiae. The wing is narrow and reminds that of *Symballophthalmus*. However, the absence of an anal lobe and consequently the loss of the anal cell and the indistinct or absent anal vein are apomorphic characters which are probably related to the reduction of the size of the basal cells. Unfortunately, it is not known if these flies still fly.

The hypandrium has also some plesiomorphic features. The left periandrial lamella is triangular and both right and left lamellae are covered with undifferentiated hairs. The tip of the right periandrial lamella is somewhat differentiated but without spoon-shaped extension. The cerci are reduced in size and the epiproct bears large spines.

The white arista, the small humeri without humeral bristle, the polished mesonotum, the long dark posteroventral bristles on the middle femora and the structure of the hypopygium all remind the *albiseta*-group. The structure of the arista is different. In *P. albiseta*-group sensu CHVALA, 1975, the arista is rather thick and very pubescent. In the *isabellae*-group it is fine and not thickly pubescent. So, the *isabellae*-group seems a sistergroup of the *albiseta*-group but with a number of apomorphic characters.

Although, the *isabellae*-group has a unique wing venation in the genus *Platypalpus*, it seems not useful to split it off in a new genus.

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#### Summary

*Platypalpus isabellae* sp. n. and *P. awarensis* sp. n. are described from the lowland of Papua New Guinea. Both species are placed in a new species-group: the *isabellae*-group.

#### Résumé

*Platypalpus isabellae* sp. n. et *P. awarensis* sp. n. sont décrits de Papouasie Nouvelle Guinée; un nouveau groupe d'espèces (groupe de *P. isabellae*) est créé pour recevoir ces deux taxa.

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## Etude zoosociologique des peuplements myrmécologiques de la Pointe de la Revellata (Calvi-Corse)\*

par M.-H. DEBOUCE\*\* et Ch. GASPAR\*\*\*

### 1. Introduction

Dans une première étude (DEBOUCE et GASPAR, 1983) nous avons abordé une analyse faunistique des fourmis de la Corse. Poursuivant ce travail, nous avons réalisé une analyse quantitative du peuplement myrmécologique de la Pointe de la Revellata, dans le nord-ouest de la Corse, au nord de la route qui conduit de Calvi à Porto. La végétation caractéristique consiste principalement en groupements de maquis et de cistaies ainsi qu'en formations littorales. Il nous a semblé intéressant de réaliser une étude de ces milieux du point de vue de leur faune myrmécologique et de les comparer avec celle d'une forêt de chêne vert (*Quercus ilex*) dont la plupart des maquis représentent des stades de dégradation.

### 2. Choix et caractérisation des stations

Nous avons choisi 13 stations dont 9 appartiennent aux groupements de dégradation de la forêt de chêne vert (maquis, cistaies, pelouses à annuelles); trois autres biotopes ont été retenus pour leurs caractères particuliers:

- a) une pente fraîche des rochers maritimes à *Narcissus tazetta*,

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