

## NOTES ON THE GENUS *PTILOGYNA* WESTWOOD (Diptera : Tipulidae)

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*Abstract* : The genus *Phacelodocera* Enderlein, 1912 is relegated to subgeneric status under the genus *Ptilogyne* Westwood, 1838, and synonymized with the subgenus *Plusiomyia* Skuse, 1890. The three species : *flabellifera* Loew, *herroni* Alexander and *margaritae* Alexander have been placed in the subgenus *Plusiomyia* Skuse, 1890. A short description of *Pt. (Pl.) herroni* is given and the female of *Pt. (Pl.) margaritae* and the male hypopygium of both species are described for the first time. A new combination for *Pl. neocaledonica* will be *Ptilogyne (Plusiomyia) neocaledonica* (Alexander).

### Introduction

Enderlein (1912) erected the genus *Phacelodocera* for the male *Ptilogyne flabellifera* Loew 1851 from Brasil. He distinguished it from *Ptilogyne* Westwood by a venational feature, namely, the presence of the *r-m* cross vein. Alexander (1948) has pointed out that several genera of primitive Tipulinae, including *Phacelodocera*, have been founded on relatively slight differences. Dobrotworsky (1968) has reduced *Plusiomyia* Skuse to the status of a subgenus of *Ptilogyne* Westwood and has included in it the only Australian species *Phacelodocera tasmaniensis* Alex. The changes were based on similarities in the structure of the male hypopygium, particularly of the adminiculum. Recently I had the opportunity to examine the two species of *Phacelodocera* described from New Caledonia.

Examination of the male hypopygium of these two New Caledonian species shows that they are similar to that of *Ptilogyne*; both species should be transferred to that genus and placed in the subgenus *Plusiomyia*.

There can be no doubt that, as suggested by Alexander (1969) the genus *Phacelodocera* should be treated as a synonym of *Ptilogyne*; *flabellifera*, thus returns to the genus in which it was originally placed by Loew (1851: 392) and put up in the subgenus *Plusiomyia*.

The type of *Pt. flabellifera* unfortunately lacks the abdomen so that the hypopygium remains unknown. However, the antenna of the female is similar to that of the female *Pt. ramicornis* (Walker) and it now seems clear that the very long branches of the male antennae constitute only a specific sexual character.

The terminal segment of the palp in *Pt. tasmaniensis* (Fig. 2) is markedly longer than the second, but it is well reduced in other species under consideration; in *Pt. flabellifera* (Fig. 1) it is only slightly shorter than the second while in both New Caledonian species (Fig. 3, 5, 6) it is much shorter.

*Plusiomyia neocaledonica* Alexander clearly conforms to the diagnosis of *Ptilogyne* (Dobrotworsky, 1968) and is allocated to the subgenus *Plusiomyia*, so that a new com-

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ination will be *Ptilogyna (Plusiomyia) neocaledonica*.

The genus *Ptilogyna* is well represented in Australia and Tasmania; only four species have been found elsewhere: three in New Caledonia and one in South America (Brazil). The distribution of this primitive genus suggests that it evolved in the eastern part of Australia before New Caledonia had separated from the continent. This is thought to have occurred during mid Tertiary (Sarasin, 1925). Jones (1917) writes that "New Caledonian Ridge lay within the Coral Sea Basin, in physical continuity with the Australian continent," until the onset of formation of the Tasman and Coral Seas in the late Eocene (about 40 M years B. P.). The alternatives to disperse across a land bridge, i. e. flight across the water gap by such weak fliers or carriage as flotsam seem highly unlikely.

Alexander (1948) has made the striking observation that no fewer than 21 generic and subgeneric groups of tipulides are common to the New Caledonia and Australian faunas.

How *Ptilogyna* reached Brazil remains a tantalizing question. However, *Pt. (Pl.) flabellifera* is very rare there and no doubt it should be treated as a relic.

The male and the female of *Pt. (Pl.) herroni* were described in detail by Alexander (1948) and only additional morphological notes, including the structure of the male hypopygium, are given here.

Alexander described the male of *Pt. (Pl.) margaritae*. A short description of the female and of the male hypopygium also is given here.

#### Genus *Ptilogyna* Westwood

##### Subgenus *Ptilogyna* Westwood

*Ptilogyna* Westwood, 1835, *Zool. Journ. London*. 5: 448. (Type-species *Tipula ramicornis* Walker, Australia).

##### Subgenus *Ctenogyna* Macquart

*Ctenogyna* Macquart, 1838, *Dipt. Exot.* 1: 42. (Type-species *Ctenogyna bicolor* Macquart, Australia).  
Subgenus.

*Euplusiomyia* Alexander, 1928, *Ann. Mag. nat. Hist.* 2: 345. (Type-species *Plusiomyia nasalis* Alexander, Australia).

##### Subgenus *Plusiomyia* Skuse

*Plusiomyia* Skuse, 1890, *Proc. Linn. Soc. N. S. W* 5: 86. (Type-species *Plusiomyia olliffi* Skuse, Australia). Subgenus

*Phacelodocera* Enderlein, 1912, *Zool. Jahrb. Syst.* 32: 26 (Type-species *Ptilogyna flabellifera* Loew, Brazil). New synonymy.

#### *Ptilogyna (Plusiomyia) herroni* (Alexander), new combination

*Phacelodocera herroni* Alexander, 1948, *Trans. R. Ent. Soc. London* 99: 370.

In ♂ first flagellar segment of antenna with single very long branch; following 8 with 3 long branches each; 2 terminal segments simple. In ♀ flagellar segments with short branches; first with apical single branch; following 8 with 2 basal branches each; in second flagellar segment

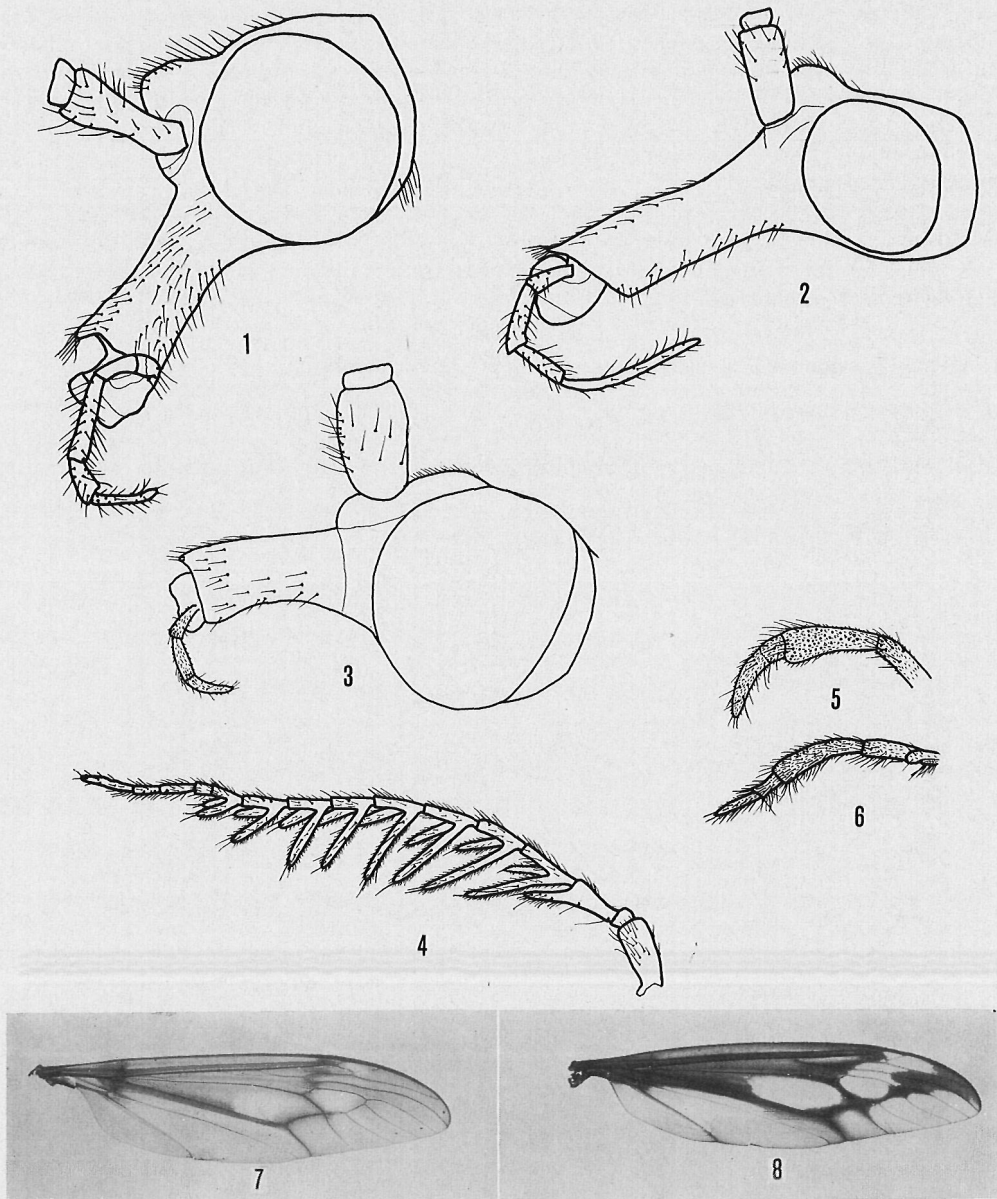


Fig. 1-8. *Ptilogyne* spp., head: *Pt. (Pl.) flabellifera*, ♂; 2, *Pt. (Pl.) tasmaniensis*, ♂; 3, *Pt. (Pl.) margaritae*, ♂. Antenna: *Pt. (Pl.) margaritae*, ♀. Palp: 5, *Pt. (Pl.) margaritae* ♂; 6, *Pt. (Pl.) herroni*, ♂. Wings: 7, *Pt. (Pl.) herroni*, ♂; 8, *Pt. (Pl.) margaritae* ♂. (All variously magnified: not to the same scale.)

1 branch reduced to tubercle; 4 terminal segments simple. Palps (Fig. 6) short; terminal segment shorter than second. Prescutum, scutal lobes and postnotal mediotergite brown; scutellum obscure yellow, contrasting with scutal lobes and postnotal mediotergite. Legs: femora, tibiae and basal tergal segment obscure yellow; tip of femora and terminal tarsal segments dark brown. Wings pale brownish yellow with paler pattern (particularly pale in ♀, or even uniformly colored with only pale patch in cell M); cell  $M_1$  sessile (Fig. 7). Abdomen yellowish with dark pattern. ♂ hypopygium (Fig. 9, 10, 11) yellowish; apical margin of tergite 9 with shallow median notch and rounded lateral lobes; inner style narrow and long, gradually curved with pointed tip; outer style narrow, as long as inner; adminiculum simple, broad and short, with rounded apophyses, not projecting.

Ovipositor with long, slender cerci; hypovalvae long and slender, appearing shorter than cerci.

**MATERIAL EXAMINED:** New Caledonia: Col de Pirogue, N. C. 14.II.1963, C. M. Yoshimoto. Mt Koghi, 500 m, 15.II.1963, C. M. Yoshimoto; New Caledonia, collected before 1963, received from P. Cochereau.

***Ptilogyňa (Plusiomyia) margaritae* (Alexander), new combination**

*Phacelodocera margaritae* Alexander, 1948, *Trans. R. Ent. Soc. London* 99: 371.

Easily distinguished from *Pt. herroni* by color of the body and distinct contrasting

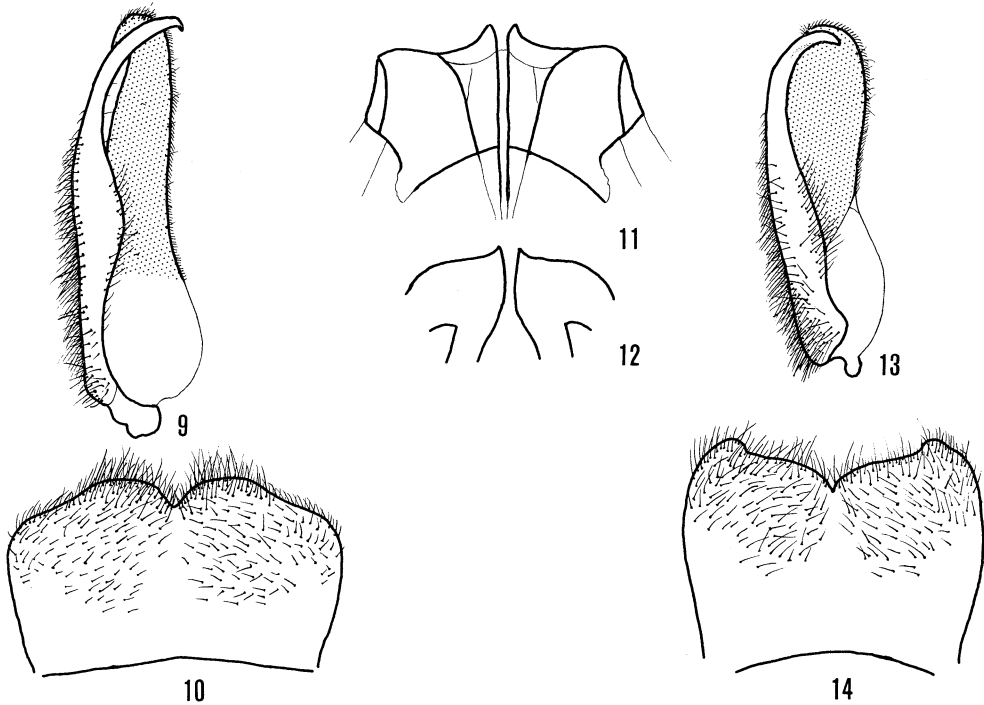


Fig. 9-14. *Ptilogyňa* spp., hypopygium, ♂: *Pt. (Pl.) herroni*: 9, inner and outer styles; 10, tergite 9; 11, adminiculum. *Pt. (Pl.) margaritae*: 12, adminiculum; 13, inner and outer styles; 14, tergite 9. (All variously magnified: not to the same scale.)

brown pattern of the wings.

♀. Similar to ♂. Branches of flagellar segments of antennae short but longer than in ♀ *Pt. herroni*; first flagellar segment with single apical branch relatively short; following 8 with 2 basal branches each; apical 4 segments simple. Prescutum yellowish gray with 3 broad orange-yellow longitudinal stripes; scutal lobes and scutellum dark brown; postnotal mediotergite yellowish gray. Legs: femora and tibiae obscure yellow with brown tips; tarsi dark brown. Wings subhyaline with brown pattern; cell  $M_1$  sessile (Fig. 8). Abdomen obscure brownish yellow; tergites darker laterally. Ovipositor brown, with long, slender cerci; hypovalvae also long and slender, appearing shorter than cerci.

♂. Hypopygium (Fig. 12, 13, 14) dark brown; apical margin of tergite 9 with shallow median notch; lateral lobes slightly produced near extremity; inner style narrow, long and bent apically; outer style narrow and only slightly longer than inner; adminiculum simple, broad and short, with rounded apophyses, not projecting.

**MATERIAL EXAMINED:** New Caledonia: Mt Koghi, 15.II.1963, C. M. Yoshimoto; Forest de Thy, 550 m, 1.III.1960, J. L. Gressitt.

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