

**EPINETTYRA SETOSA PERMKAM & HANCOCK, AN
AUSTRALIAN REPRESENTATIVE OF TRIBE PHASCINI
(DIPTERA: TEPHRITIDAE: PHYTALMIINAE)**

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Abstract

Epinettyra setosa Permkam & Hancock, described from northern Queensland as an aberrant species of tribe Trypetini in subfamily Trypetinae, is transferred to tribe Phascini in subfamily Phytalmiinae. It is the only known Australian representative of an otherwise New Guinea tribe that also includes *Gressittidium* Hardy.

Introduction

When *Epinettyra setosa* Permkam & Hancock (Figs 1-2) was described from northern Queensland, it was placed in an isolated position within the tribe Trypetini in the large and then poorly defined subfamily Trypetinae (Permkam and Hancock 1995). Subsequently, Korneyev (1999) divided the Trypetinae as then recognised into two distinct subfamilies, Phytalmiinae and Trypetinae. Han (1999) discussed the tribe Trypetini in greater detail and suggested that *Epinettyra* Permkam & Hancock appeared closer to tribe Acanthonevrini (in subfamily Phytalmiinae) than to true trypetines.

Korneyev (1994) proposed the subfamily Phascinae, later regarded as a tribe Phascini within the Phytalmiinae (Korneyev 1999), to include the following New Guinea genera: *Diarrhegmoides* Malloch, *Othniocera* Hardy, *Paraphasca* Hardy, *Phasca* Hering and *Xenosophira* Hardy. Hancock and Drew (2003) added *Stigmatomyia* Hardy to the tribe and Hancock (2011) also included the putative Sumatran species *Paraphasca biangulata* (de Meijere). Distinguishing features of the tribe include the wing pattern, bare spermathecae with a nipple-like apex and, except in *Paraphasca*, a dorso-ventrally compressed and distally tapered aculeus of the 'piercing' type (Korneyev 1999). To these may be added the shape of the wing veins, particularly the often strongly curved apical portion of vein M.

A re-examination of the characters of *Epinettyra* suggests that Han's (1999) assessment of a phytalmine relationship was largely correct and that it properly belongs in tribe Phascini. Comparative descriptions and illustrations may be found in Hardy (1980, 1986) and Permkam and Hancock (1995).

Discussion

The following characters of *Epinettyra* are shared with at least some (and in some cases all) other genera of Phascini: large, conspicuous labellum; enlarged third antennal segment; arista short-plumose (not bare as originally described); fine pubescence on frons; only 1 pair of frontal setae, as in *Stigmatomyia arcuata* Hardy and some specimens of *Othniocera aberrans* Hardy; weak ocellar setae; face almost vertical with protruding epistome; intrapostalar setae absent, as in *Diarrhegmoides hastatum* Malloch and

Gressittidium flavicoxa Hardy; only 2 pairs of scutellar setae, as in *Xenosophira*; wing veins R_{2+3} , R_{4+5} and M undulate and R_{4+5} setulose; R-M crossvein near middle of cell dm and below stigma, as in *Stigmatomyia* and *Gressittidium* Hardy; oblique dark band across apical part of vein M; stigma very dark; leg setation (especially of the fore femur and hind tibia) as described for *Xenosophira* by Hardy (1980) and illustrated for *Phasca trifasciata* Hardy by Hancock and Drew (2003); surstyli elongate; aculeus dorso-ventrally compressed and apically acute with no or only microscopic subapical setulae; three mushroom-shaped spermathecae with slender necks and a tapering apical protuberance, very similar to those of *Paraphasca*.

Distinguishing generic characters include: 1 pair of orbital setae rather than 2 pairs; scutum, scutellum and abdomen densely setulose; no distinct costal spine above apex of vein Sc; cell bcu extension short and broad; dark, inverted V-shaped band of wing reduced to a single oblique band across vein M, the band across DM-Cu crossvein reduced to a very faint infuscation most evident across apex of vein Cu_1 ; there is also a very pale tint to almost all of cell dm. The absence of the costal spine might also occur in *Paraphasca biangulata* (de Meijere) (see Hancock 2011) and it is reduced in *Gressittidium*, which on balance of characters (including wing shape, pattern and venation, scutal pattern, leg setation and labellum) is also referable to tribe Phascini. The mesonotum is also densely setulose in *Gressittidium* (see Hardy 1986).

The above characters of *Epinettyra*, particularly the large labellum, curvature of the wing veins, enlarged third antennal segment, apically protuberant spermathecae and piercing aculeus, indicate a closer relationship with tribe Phascini than any other group of Tephritidae. The curvature of vein M is weakest in *Phasca* and distinct in the remaining genera.

Although the inverted V-shaped wing band, regarded as a possible synapomorphy of tribe Phascini by Korneyev (1999), is reduced to a simple, almost straight band across vein M with only a trace of the band across the DM-Cu crossvein in *Epinettyra*, the presence of at least this band in all known species of Phascini, plus the large labellum and curved wing veins, appear to be diagnostic characters of the tribe and separate it from all other tribes currently included in subfamily Phytalmiinae. The shape and orientation of the wing band is similar to that of *Stigmatoyia arcuata* and *Xenosophira vibrissata* Hardy, differing in being united with the costal band. The pale scutum, lacking the 3 longitudinal yellow vittae against a black background typical of most genera, is similar to that seen in *Paraphasca* and some *Othniocera* species, while the position of the R-M crossvein, setose mesonotum and lack of a distinct costal seta above the apex of vein Sc suggest a relationship with *Gressittidium*. Accordingly, *Epinettyra setosa* (known from Atherton and Iron Range) is here transferred to the Phascini as the only known Australian representative. Nothing is known of its biology.



Figs 1-2. *Epinettysra setosa*, holotype male: (1) dorsal view; (2) lateral view. Photographs by Federica Turco (Queensland Museum, Brisbane).

Acknowledgement

I thank Federica Turco (Queensland Museum, Brisbane) for the photographs.

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