

TWO NEW DROSOPHILIDS FROM SOUTH INDIA (DIPTERA : DROSOPHILIDAE)

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ABSTRACT. Two new drosophilids, *Drosophila (Drosophila) chamundiensis* and *Phorticella striata* are described from Karnataka, South India.

✓ 1. *Drosophila (Drosophila) chamundiensis*, sp. nov. (Fig. 1) *syn. of chamundiensis*

10632 ✓ *Male and female* : Large yellowish-coloured flies. *Head* : Arista 9 branched, including fork (6/3); basal segment of antenna with two stiff bristles; anterior orbitals proclinate; mid and posterior orbitals reclinate; mid orbitals 0.66 the size of the anterior; posterior orbitals approximately as long as anterior; ocellar triangle narrow; anterior and posterior verticals of equal length, post-verticals $0.75 \times$ the size of the ocellars; eyes bright red, pilose. *Thorax* : Greyish. Acrostichal hair in 8 rows, slightly irregular, anterior scutellars crossed, posterior scutellars crossed and convergent; posterior dorsocentrals longer than the anterior dorsocentrals. *Legs* : Cuneiform bristles present on first femur; preapicals on first and second tibiae. *Wings* : Smokey; halteres transparent and yellow. *Abdomen* : Pigmented band confined to the caudal region of each tergum; no sexual dimorphism with regard to pigmentation. *Internal organs* : Testis 1.5 coils; paragonia transparent; female reproductive organs as in *D. immigrans*. *Periphallic organs* (Fig. 1) : Epandrium oval-shaped, slightly broader below; a row of long bristles along the under margin of epandrium; cerci free from epandrium, oblong and each carrying about 24 to 26 long bristles distributed all over and a tuft of 3 to 4 small bristles at its lower tip; surstylus carrying 11 to 12 highly chitinized teeth. Egg with four long and tapering egg filaments.

Cytology : Metaphase karyotype revealed the presence of a pair of V's, a pair of dots and two pairs of rods in females, while one of the rods of one pair replaced by a J-shaped Y chromosome in males. Four long arms and one short arm in salivary gland nuclei as in *D. immigrans*.

Holotype ♂, INDIA : KARNATAKA : foot of Chamundi Hills, 25.vii.1971, S. Nirmala Sajjan and N.B. Krishnamurthy. Deposited in the Museum of the Department of Zoology, University of Mysore, Mysore. *Allotype* ♀, data as above. *Paratypes* 2♂♂ 2♀♀, with the same data; deposited in the Department of Biology, Tokyo Metropolitan University, Setagaya-Ku, Tokyo, Japan,

Distribution : India : Karnataka.

Belongs to the *immigrans* group of *Drosophila*. The nature of male epandrium with long bristles is unique to the species thus differentiating it from other members of the *immigrans* group.

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✓ 2. *Phorticella striata*, sp. nov. (Fig. 2)

= *flavipennis* Duda

Male and female : Large yellow flies with two distinct longitudinal, chalky-white, striations extending from the base of antennae to tip of scutellum. *Head* : Arista 8-branched, including fork (6/2). Terminal segment of antenna dark brown; basal segment carrying two stiff bristles followed by several smaller ones; carina narrow and shiny; vibrissae with one stiff bristle followed by smaller ones and with black patch at its base; ocellar triangle narrow; longitudinal silvery stripes along the frontal side of each orbit; proboscis roundish; palpi with two stiff bristles along with smaller ones; anterior orbital proclinate, mid orbital reclinate, 0.5 × the size of the anterior; posterior orbital reclinate and longest; anterior vertical proclinate and posterior vertical reclinate and crossed; postvertical as long as posterior orbital and reclinate. *Thorax* : Dark brown. Two longitudinal chalky-white stripes, well marked by a dark hue at either side, extend to the tip of the scutellum; acrostichals in six irregular rows; anterior scutellars convergent; posterior scutellars convergent and crossed; three longitudinal brown striations present on each side of the mesonotum. Wings hyaline; halteres pale yellow. *Legs* : No sex comb; preapicals only on second pair of legs. *Abdomen* light yellow; no sexual dimorphism with regard to pigmentation; abdominal setae arising from black spots. *Periphallic organs* (Fig. 5) : Epandrium uniformly broad along its length; cerci independent of epandrium and carry about 25 to 27 bristles; posteroventral margin possessing two bristles; epandrium rolled inside; surstylus arising slightly behind posterior margin of epandrium, carrying 7 teeth.

Holotype ♂, INDIA : KARNATAKA : Soundatti, 5.ix.1971, grape gardens, S. Nirmala Sajjan and N.B. Krishnamurthy. Deposited in the Museum of the Department of Zoology, University of Mysore, Mysore. *Allotype* ♀, data as above. *Paratypes* : 2♂♂ 2♀♀, with the same data; deposited in the Department of Biology, Tokyo Metropolitan University, Setagaya-Ku, Tokyo, Japan and to be deposited in the collections of Z.S.I. at Calcutta, I.A.R.I. at New Delhi, and the University of Texas.

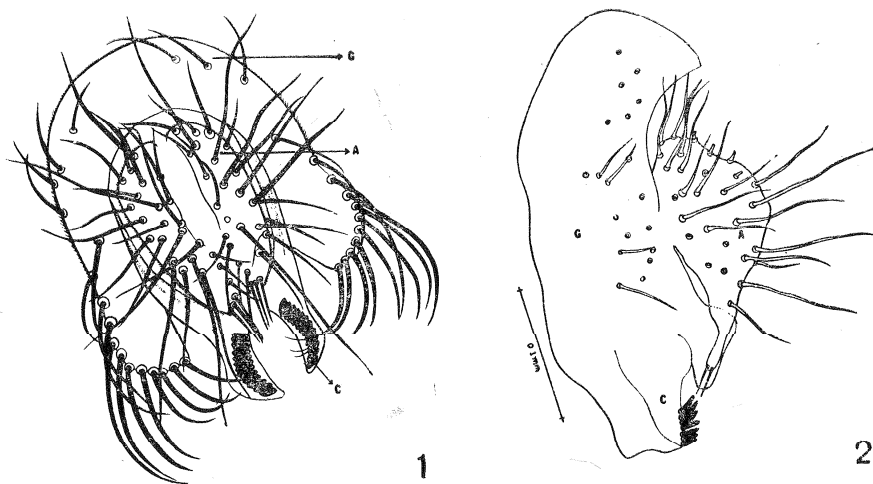
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Distribution : India : Karnataka.

This species comes close to *Phorticella flavipennis* Duda, from the Moluccas, by having a black patch at the base of vibrissae and black spots at the insertions of abdominal setae. It however differs in the nature of wings. *P. striata* has wings hyaline and smoky, while in *P. flavipennis* the wings are yellow with brown veins.

The species is named after the characteristic striations on the head, mesonotum and scutellum.

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Figs. 1-2. Periphallic organs : 1, *D. chamundiensis*; 2, *Phorticella striata*. A, cerci; C, surstylus; G, epandrium.