

## STUDIES ON *INCERTELLA* SABROSKY (DIPTERA : CHLOROPIDAE) FROM THE ORIENTAL REGION

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### INTRODUCTION

*Incertella* Sabrosky is a relatively small genus hitherto reported only from the Holarctic Region. Species of this genus were earlier described by Duda (1933), Collin (1946), Nartshuk (1970), Andersson (1977) and others under *Tropidoscinis* Enderlein. However, Sabrosky (1980), based on his study of the syntypes of *luederwaldi* Enderlein, the type species of *Tropidoscinis*, redefined the genus which according to him is limited in its distribution to the Neotropical Region. He separated species possessing yellow halteres, dull and grey to brownish grey tomentose frontal triangle and scutum and 1 + 1 *npl*, earlier described under *Tropidoscinis*, and included them in his new genus *Incertella*.

No species has been described under *Incertella* from the Oriental Region. One new species, *Incertella luteifrons* from India is described here and *sulcata* from Sumatra and *indica* from India are transferred to *Incertella*.

The type specimens are deposited in the collections of Southern Regional Station, Zoological Survey of India, Chennai.

**Key words** : New Species, *Incertella* Sabrosky, Chloropidae, Oriental Region.

### *Incertella* Sabrosky

1980. *Incertella* Sabrosky, *Proc. Entomol. Soc. Wash.*, **82**(3) : 420-422. Type species : *Incertella incerta* (Becker) 1912 (= *Oscinella incerta* Becker). By original designation.

1911. *Tropidoscinis* acutt. nec Enderlein.

Small, slender species with heavily tomentose frontal triangle and usually 1 + 1 *npl*.

**Head** : As high as or higher than long; frons broader than and slightly projecting in advance of eye; frontal triangle broad at base, reaching from middle to anterior margin of frons, heavily tomentose; facial profile receding, deeply concave; vibrissal corner a right angle or slightly obtuse; gena linear to one-third or a trifle more as wide as ant 3; antennae of moderate size; arista short

pubescent; proboscis and palpi short. Head bristles with distinct *ivt* and *ovt*, erect *pvt*, subparallel reclinate and slightly converging *oc* and hair-like *orb* of which upper 2-4 may be stouter.

*Thorax* : Dull, densely tomentose except for shining lower half of pleura; hairs on scutum arranged mostly in rows; scutellum broad and short, broadly rounded apically; thoracic bristles with 1 weak *h*, 1 + 1 or 1 + 2 *npl*, 1 *pa*, 1 *dc*, *as* and 1-2 *ss* bristles.

*Legs* : Short with narrowly oval tibial organ and femoral organ of 2 rows of closely placed warts bearing short, stout spines. Wings usual for Oscinellinae; costa reaching M 1 + 2 and ending at apex of wing; second costal sector longer than the third; r-m cross-vein nearly in the middle of discal cell or slightly beyond; anal area usually well developed.

*Abdomen* : Oval, tomentose, with dark hairs. Female cerci slender; male genitalia with distinct cerci, flat and simple surstylus, incurved postgonites and well developed phallus.

*Distribution* : Holarctic and Oriental Regions.

*Remarks* : Sabrosky (1980) included under *Incertella* only species possessing 1 + 1 *npl* which according to him is a distinctive character of the genus. Though Andersson (1977) considered *zurcheri* (Duda), a palaearctic species possessing 1 + 2 *npl*, congeneric with *albipalpis* (Meigen) and *kerteszi* (Backer) which have 1 + 1 *npl* typical of *Incertella*, yet Sabrosky (1980) stated that *zurcheri* "seems to me to belong to *Oscinella*" Later, based on his studies, *zurcheri* along with *exigua* described from the Oriental Region by Duda (1934) under *Tropidoscinis* were transferred to *Oscinella* in the list of species in the holdings of the United State's National Museum.

I have 3 species belonging to *Incertella* before me which include *sulcata* (Duda) and *indica* (Cherian), the two remaining species from the Oriental Region described earlier under *Tropidoscinis*. Both these species have 1 + 2 *npl* while in one new species, *luteifrons* from India described here, there are only 1 + 1 *npl*, typical of *Incertella*. However *indica* and *sulcata* show marked similarities to *luteifrons*, a typical species of *Incertella*, in the general body characters and the development of male genitalia and it is apparent that all the three are congeners. Hence it is felt that generic limits of *Incertella* should be redefined to include species possessing either 1 + 1 or 1 + 2 *npl*.

#### Key to the species from the Oriental Region

1. Notopleural bristles 1 + 2; gena at most one-third as wide as ant 3; scutum black or brownish black 2
- Notopleural bristles 1 + 1; gena half as wide as ant 3; scutum laterally yellowish brown  
 ..... *luteifrons*, sp. n.

2. Gena atleast one third as wide as ant 3; frons, antennae and scutellum black; legs partly black; discal cell more of *Oscinella*-type ..... *indica* (Cherian)
3. Gena sublinear; frons and scutellum partly and antennae almost entirely yellow or brownish yellow; legs wholly yellow; discal cell conspicuously narrowing basally .... *sulcata* (Duda)

***Incertella indica* (Cherian) N. Comb.**

(Figs. 1-2)

1973. *Tropidoscinis indicus* Cherian, *Oriental Insects*, 7(4) : 507-509. Type localities : India : UP : Agra; Kerala : Thumpamon; Assam : Bhoilymbong.

I have examined 5 more specimens collected from Tamil Nadu which agree entirely with the types. As in the original diagram some of the male genitalic features were not clearly depicted, male genitalia (Figs. 1 & 2) are redrawn here.

*Specimens examined* : Apart from the holotype and paratypes, the following specimens were examined : 2 males, 2 females, Tamil Nadu : Kodayar, 30.iii.1989, Coll. Koshy Mathew; 1 female, Tamil Nadu : Palani Hills, 29.iv.1989, Coll. P. T. Cherian.

*Remarks* : In the development of general body characters and genitalia *indica* markedly resembles other species of *Incertella*, including the new species *luteifrons* described in this paper. As mentioned earlier, generic limits of *Incertella* are redefined to include species possessing 1 + 1 or 1 + 2 *npl*. Hence *indica* and its congeners having 2 posterior *npl* are transferred to *Incertella*.

***Incertella sulcata* (Duda) N. Comb.**

(Figs. 3-4)

1934. *Tropidoscinis sulcata* Duda, *Tijdschr. Ent.* 77 : 110. Type locality : Sumatra : Fort de Kock.

This species is hitherto known by the 8 type specimens from Sumatra. I have 9 more specimens from India which agree with the original description. Some of the body characters not described earlier are given here.

Eye large, with very minute, sparse pubescence; gena nearly linear; *pvt* equal to *ovt*. Scutellum 0.62 x as long as wide, dark brown at base, brownish yellow distally at margin and below, with flattened disk. Wing 2.5 x as long as wide, proportions of costal sectors 2 to 4 in the ratio 14 : 16 : 7; r-m cross-vein distad of middle of discal cell, opposite 0.6 of its length; discal cell narrowing towards wing base; anal angle slightly reduced and hence wing widest in the middle.

*Specimens examined* : 1 female, Tripura : Paratia, 10.x.1997, Coll. N. Muraleedharan; 2 males (abdomen damaged), E. Tripura : Amarpur, 12.x.1977, Coll. N. Muraleedharan; 2 females,

W. Tripura : Telimura, 20.x.1977, Coll. N. Muraleedharan; 1 male, 1 female (both partly damaged), Tripura : Ambasa, 26.x.1977, Coll. N. Muraleedharan; 1 female, Assam : Garampani, 11.ix.1977, Coll. P. T. Cherian; 1 female, Tamil Nadu : Yercad, 27.xii.1989, Coll. P. T. Cherian.

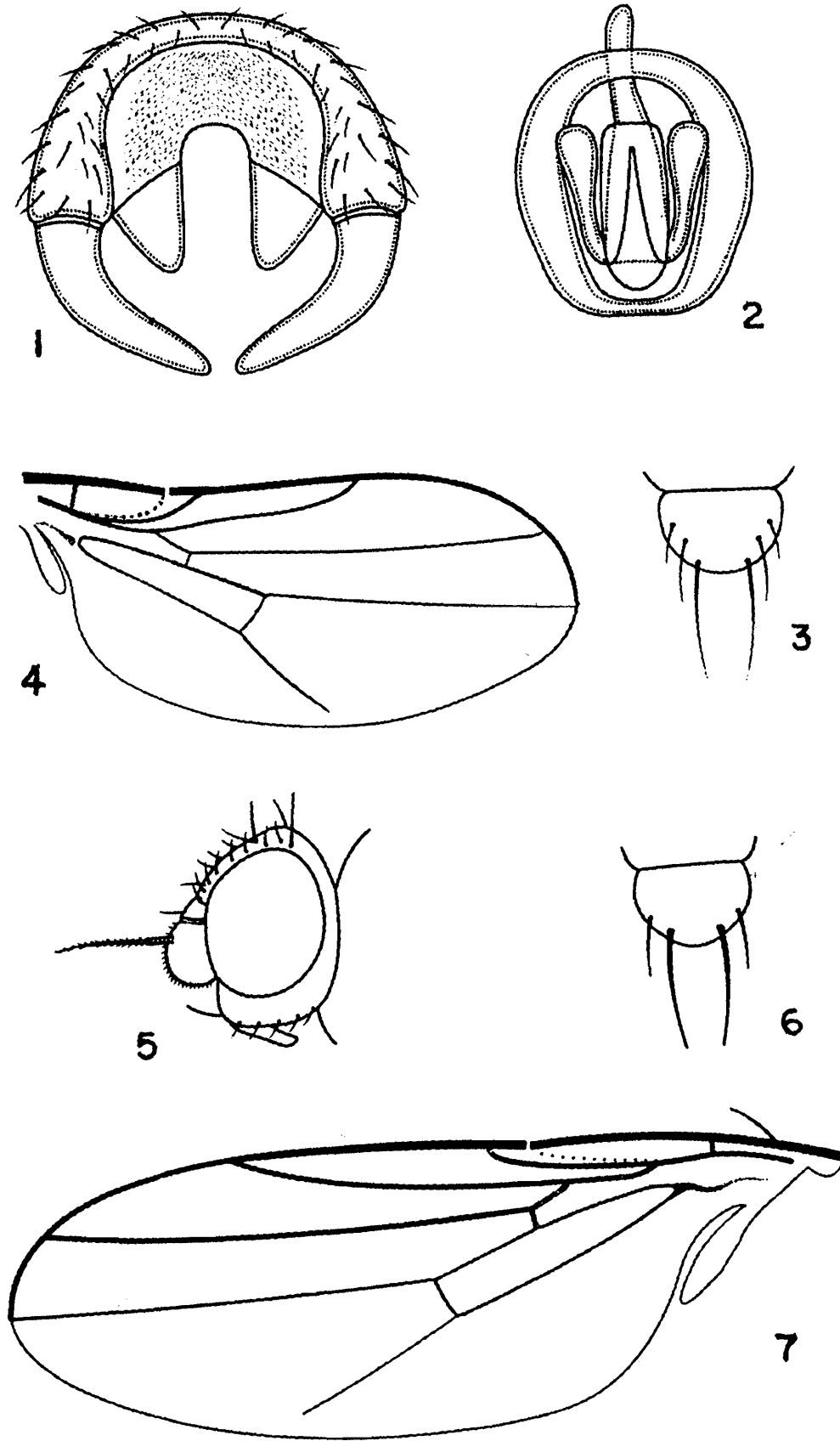
*Remarks* : This species which shows similarities to other members of *Incertella*, in spite of possessing 2 posterior *npl* as in *indica* (Cherian), is transferred to this genus from *Tropidoscinis*. With its slightly reduced anal angle, basally markedly narrowed discal cell and prominent *pvt*, which is more developed than *oc*, *sulcata* differs from other species of the genus. This species is being reported for the first time from India and after it was originally described from Sumatra in 1934.

*Incertella luteifrons*, sp. n.

(Figs. 5-7)

*Female* : *Head* : (Fig. 6) Wider than high, length, height and width ratio 11 : 15 : 21; frons nearly parallel sided, width at vertex 1.2 x its length, grey tomentose, projecting above but not beyond anterior margin of eyes, dark brown around vertex margin and gradually turning brownish yellow anteriorly and ending with concave anterior margin; frontal triangle large, dull brownish black, densely dark grey tomentose, reaching anterior margin of frons and ending with slightly pale obtuse apex. Eye elongated oval, densely pubescent, with slightly oblique long axis. Face deeply concave, dark brown and grey tomentose; facial carina distinct, triangular between antennae and reaching nearly middle of face; epistomal margin raised up. Antennae rather erect, mostly brownish black but ant 2 and basal part of ant 3, especially in one specimen, with light brown tinge; ant 3 about three-fourths as long as wide; arista short, brownish black, with short, fairly dense, concolorous pubescence. Gena nearly half as wide as ant 3, pale yellow with a few hairs; postgena well developed, concolorous with gena; vibrissal corner rather obtuse. Palpi brownish yellow; proboscis rather slender, basally shiny brownish black, distally yellowish brown, bearing slender, erect hairs. Head bristles brownish black; *ovt* longer and stouter than other head bristles; *ivt* about half as long as *ovt* but very slender; *pvt* convergent, about two-thirds the *ovt*; *oc* almost subparallel, recumbent, longer than *pvt*; *if* 7, turned inward and slightly proclinate; a few short *fr* present between *if* and *orb* mostly in the anterior part of frons; vibrissal bristle distinct; oral margin with a row of pale, slender setae.

*Thorax* : Scutum nearly as wide as long, predominantly dull brownish black but humeral callus and the area behind it upto the wing base and below covering anterior part and upper half of pleural region yellowish brown, especially in one specimen, wholly dark grey tomentose with well developed dark brown hairs arranged in longitudinal rows; scutellum (Fig. 7) about two-thirds as long as wide, disk only slightly convex, blackish brown with yellowish brown tinge around apex, pubescent and tomentose like scutum; *h* 1, subequal to *ovt*; *npl* 1 + 1, subequal and a trifle longer and stouter than *h*; *pa* 1 equal to and 1 *dc* a trifle longer than *npl*; *pa* 2 hardly



Figs. 1-2. : *Incertella indica* (Cherian) : 1-2, Male genitalia.

Figs. 3-4. : *Incertella sulcata* (Duda) : 3, scutellum; 4, wing.

Figs. 5-7. : *Incertella luteifrons*, sp. n. 5, head; 6, scutellum; 7, wing.

distinguishable from thoracic hairs; *as* 1.25 x as long as scutellum, distally convergent; *ss* 1 half the *as*.

*Wing* : (Fig. 8) Longer than body, 2.7 x as long as wide, hyaline with brown veins; proportions of costal sectors 2 to 4 in the ratio 5 : 5 : 2; r-m cross-vein proximad of middle of discal cell, opposite 0.55 of its length; r 4 + 5 and m 1 + 2 nearly parallel in the distal part of wing; wing wider in the middle, anal angle rather reduced; knob of haltere yellowish brown, stalk brownish yellow.

*Legs* : Long, rather slender, almost wholly brownish yellow; tibial organ distinct.

*Abdomen* : Longer than wide, suboval, subshiny brownish black with slender hairs. Female cerci of medium size.

*Length* : Female 2 mm; wing 1.8 mm.

*Holotype* : Female, India : Meghalaya : Naya Bungalow, 10.i.1979, Coll. P. T. Cherian.

*Paratype* : 1 female, collection data same as of holotype.

*Gender and derivation* : Feminine, referring to the yellow colour of frons.

*Incertella luteifrons* is a typical species of the genus as defined and understood by Sabrosky (1980). It shows affinities to *sulcata* (Duba) but while in the former antennae are predominantly brownish black, gena is half as wide as ant 3, there is only one posterior *npl* and scutum is dull not subshiny, in the latter antennae are yellow, gena is linear, there are two posterior *npl* and scutum is partly subshiny.

## SUMMARY

*Incertella* Sabrosky is reported for the first time from the Oriental Region. One new species viz. *luteifrons* from India is described and *indica* (Cherian) from India and *sulcata* (Duda) from Sumatra are transferred to this genus from *Tropidoscinis* Enderlein.

## ACKNOWLEDGEMENTS

I am thankful to the Director, Zoological Survey of India, Calcutta for encouragement.

## ABBREVIATIONS

*ant* 2, second antennal segment; *ant* 3, third antennal segment; *as*, apical scutellar bristle; *1 dc*, first dorsocentral bristle; *h*, humeral bristle; *if*, inter frontal bristle; *ivt*, inner vertical bristle; *npl*, notopleural bristle; *oc*, ocellar bristle; *orb*, fronto-orbital bristle; *ovt*, outer vertical bristle; *pa*, post alar bristle; *pvt*, post ventral bristle; *ss*, subapical scutellar bristle.

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