A new species of *Phumosia* from Malaya, Malaysia (Diptera: Calliphoridae)

Hiromu KURAHASHI*

*Department of Medical Entomology, National Institute of Health,
Shinagawa-ku, Tokyo 141, Japan*

(Received: December 9, 1988)

Key words: Calliphoridae, Diptera, Malaysia, new species, *Phumosia*, taxonomy.

Abstract: *Phumosia viridis* sp. nov. is described and included in a revised key to the Oriental species of the genus *Phumosia* Robineau-Desvoidy.

INTRODUCTION

During the field survey of medically important flies, I found a strange green bottle fly in tropical rain forests in Malaya, Malaysia. This species has a similar general appearance to that of *Lucilia* Robineau-Desvoidy, and the hairy supraspiracular convexity is characteristics of *Phumosia* Robineau-Desvoidy, *Hemipyrellia* Townsend and *Hypopygiopsis* Townsend. However, it can be easily distinguished from the latter two genera and *Lucilia* in having no tuft of black erect hairs on a small well-defined black sclerite of posterior suprasquamal ridge. The genus *Phumosia* Robineau-Desvoidy has been known as a group of testaceous flies. Examination of male genitalia has concluded it must be a new species of *Phumosia* despite the metallic coloration of the body. Hereafter the description is given for this species. Hii Lu King and Kurahashi's key (Hii Lu King and Kurahashi, 1977) to the Oriental species of *Phumosia* should be slightly modified in order to incorporate the present new species. A revised key is provided for all the Oriental species (9 spp.).

Key to the Oriental species of *Phumosia* Robineau-Desvoidy

1. Body entirely metallic blue with purple tinge like that of *Lucilia* species
..... *P. viridis* sp. nov.
- Body usually testaceous yellow at least in part or largely, or entirely dark brown with bronze tinge 2
2. Sternopleural bristles 1+1; tympanic tuft of black hairs developed; supra-squamal ridge bare, at most with a few minute hairs on anterior and posterior extremities; face with a pair of minute setulae on upper part of oral warp; hairs of post-alar declivity stiff and black
..... 3
- Sternopleural bristles 2+1; tympanic tuft absent; suprasquamal ridge with fine yellow hairs on almost entire length; pair of setulae on upper part of oral warp small but prominent, usually as long as width of 3rd antennal segment; hairs of post-alar declivity finer and yellow, a few setulae blackish 6
- Sternopleural bristles 2+1; tympanic tuft absent; suprasquamal ridge with a few minute hairs on anterior and posterior extremities; face with a pair of minute setulae on upper part of oral warp; hairs of post-alar declivity stiff and black; hind tibia with 3 *pd*; wings

* 倉橋 弘: 国立予防衛生研究所衛生昆虫部 (〒141 東京都品川区上大崎 2-10-35)

- hyaline with no costal suffusion; body dark brown with blue tinge
 P. murphyi Hii et Kurahashi
3. Postsutural *ac* 1 4
 — Postsutural *ac* 3–4
 P. violacea (Séguy)
4. Scutellum yellowish brown 5
 — Scutellum dark, fuscous black
 P. nigronitens (Senior-White)
5. Mesonotum all pale testaceous; hind tibia with 2 *pd*
 P. testacea (Senior-White)
- Mesonotum with dark markings; hind tibia with 1 *pd*, sometimes 2 *pd* in specimens collected in Thailand
 P. indica (Surcouf)
6. Postsutural *dc* 4
 P. promittens (Walker)
- Postsutural *dc* 3 7
7. Genal hairs black; hind tibia with 1 *pd*
 P. abdominalis Robineau-Desvoidy
- Genal hairs yellow; hind tibia with 2 *pd*
 P. costata Malloch

***Phumosia viridis* Kurahashi, sp. nov.**

Male. Head: eyes bare, holoptic, separated at point of closest approximation by a distance less than the width of anterior ocellus; frons index 0.02; frontal stripe blackish brown, widened anteriorly and posteriorly, reduced to a fine line at narrowest point of frons; parafrontalia very narrow, silver-white dusted, darkened toward vertex, very sparsely setulose anteriorly, provided with *ca* 9 pairs of *ori* and fine interstitials, several small additional present in front of narrowest point of frons; parafacialia narrow, less than half the width of 3rd antennal segment, densely snowy-white dusted, bare; facialia brown, densely snowy-white dusted, setulose on less than lower half; medianae narrow, yellowish brown, snowy-white dusted; vibrissaria narrow, brown, snowy-white dusted, with black setulae; vibrissae strongly developed; epistome brown, silver-dusted; genae blackish, submetallic, slightly covered with grey dustings, clothed with black hairs; postgenae concolorous with genae, clothed with black hairs; occiput black, densely silver-grey dusted, with black hairs except for pale brown ones on central and lower parts, occipital dilatation snowy-

white, upper occipital portion just behind vertex is more or less reddish; 2nd antennal segment yellowish brown; 3rd antennal segment yellowish brown, more or less darkened dorsally, silver pubescence is clear in a certain incident of light, nearly $2.5\times$ as long as 2nd; arista blackish brown except for yellowish base, long plumose entirely; palpi phylliform, yellowish brown, with black setulae.

Thorax: entirely metallic green, with thin covering of silver dusting, without distinct marking on dorsum; humeri, postalar calli and scutellum concolorous with dorsum, the former two are more or less reddish along sutures between scutum and themselves; prosternum with blackish hairs; propleura with brownish hairs; supraspiracular convexity covered with fine upstanding blackish hairs; hypopleural hairs fine and blackish, bearing along upper and posterior margins, other pleural hairs also black; mesothoracic spiracle large, blackish brown, its major axis nearly as long as anterior margin of mesopleuron, metathoracic one blackish brown, with fine long hairs along lower margin of flaps as observed in *Catapicephala*; postalar declivity with a tuft of black hairs developed; tympanic tuft absent; anterior parasquamal tuft absent, but suprasquamal ridge with fine pale setulae. Chaetotaxy; *ac* 1+2, *dc* 2+4, *ia* 1+3, *h* 3, *ph* 2, *prs* 1, *sa* 3, *pa* 3, *st* 2+1, *sc* 5+1, *n* 2, *pp* 1–2, *pst* 1–2.

Wings: entirely brownish hyaline; veins brown; epaulet blackish; basicosta black; subcostal sclerite brown, blackish pubescent on apical $2/3$; 3rd longitudinal veins setulose above and below on the way of $2/3$ to $3/4$ from node of 2nd and 3rd veins to *r-m*; node of humeral and subcostal veins with several black setulae below; base of 1st longitudinal vein with 1 black setula below; 4th longitudinal vein bent with right angle, but the corner rounded, section of the 4th vein from bent to wing edge concave; squamae blackish brown, with a tuft of blackish soft hairs on inner lower margin of alar one, thoracic one bare on upper surface, lobulated. Halteres blackish brown.

Legs: femora fuscous black, submetallic, tibiae and tarsi more or less reddish brown, with black hairs; fore tibia with 1 strong *p* and 3–4 short *ad* on basal half; mid tibia

Fig. 1 *Phumosia viridis* sp. nov., male hypopygium.

a: epandrium, cercus and parolobus, lateral view; b: cerci and paralobi, caudal view; c: aedeagus, lateral view; d: aedeagus, posterior view; e: anterior and posterior parameres, lateral view.

with 1 *ad*, 1 *pd*, 2 *p* and 1 *v*; hind tibia with 3 short *ad*, 3–4 short *pd* and 1 *av*, anteroventral surfaces of apical half of fore tibia and metatarsus golden pubescent, apical 1/3 of hind tibia and three basal segments of hind tarsus also golden pubescent.

Abdomen: entirely metallic blue, with purple tinge, black haired, with neither marginal bands nor median stripe, without distinct dustings except for dark grey ones on venter; tergite 1+2 with several decumbent lateral marginal bristles; tergite 3 with a row of decumbent marginal bristles; tergites 4–5 with a row of erect marginal bristles, without discals; sternites black, black haired, with marginal bristles on 2nd to 4th sternites; hairs on sternites and lateral sides of tergites not remarkably developed; hypopygium normal in size. Male genitalia as shown in Fig. 1.

Female. Head: eyes dichoptic, separated at vertex by a distance equal to 0.26 of head width; frontal stripe blackish brown, reddish anteriorly, parallel-sided, slightly narrowed anteriorly, slightly more than 3× the width of 1 of parafrontalia just in front of anterior ocellus, without interfrontal bristles and setulae; parafrontalia with *ca* 8 pairs of *ori* and several fine interstitials; *ors* 2+1; *oc* developed; *acoc* absent; *pooc* fine; *ov* and *iv* well developed; *poc* divergent; *occ* 1.

Thorax: with purple tinge; lower parts of humeri, pteropleura and hypopleura more or less reddish, especially along sutures.

Wings: base of 1st longitudinal vein with a few black setulae below.

Legs: hind tibia with 2 *pd* and 2 *av*.

Abdomen: marginal bristles on median part of tergite 3 relatively weak and decumbent. Ovipositor stout. Otherwise same as for male.

Length. 10.5–12.0 mm.

Holotype ♂, MALAYSIA: Malaya, Ku-

ala Tahan, Taman Negara, 60 m, 22–26. IV. 1979, H. Kurahashi.

Paratypes. MALAYSIA: 1 ♂ 3 ♀, same data as holotype.

Type depository. Holotype in the B. P. Bishop Museum, Honolulu; paratypes in BPBM and author's collection in the National Science Museum (Nat. Hist.), Tokyo.

Remarks. The specific name is derived from the metallic green coloration of the body which can distinguish this new form from the previously known species from the Oriental region.

Bionomics. Adults were found only in dense forests and attracted to spoiled meat.

Distribution. Malaysia (Malaya).

REFERENCES

- Hii Lu King, J. and H. Kurahashi (1977): A new *Phumosia* species from East Malaysia, Borneo (Diptera: Calliphoridae). *Sarawak Mus. J.* (N.S.), 25: 221–225.

摘 要

マレーシア、マラヤで採集されたウリンクロバエ属の1新種(双翅目:クロバエ科)

マラヤの熱帯雨林で衛生上重要なハエ類の調査を行った際、キンバエに似た緑色光沢のクロバエ科の1種を採集した。本種は後気門上隆起(後胸前側板)に長毛を装うことから、ニセキンバエ属 *Hemipyrellia* Townsend とシリプトキンバエ属 *Hypopygiopsis* Townsend に似るが、鱗弁上肋部後方に毛束をもたないことからこれらのキンバエ族のものから区別される。中胸気門が大きいこと、顔面下部に2本の黒色毛をもつこと、雄の外部生殖器の特徴から本種はウリンクロバエ属 *Phumosia* Robineau-Desvoidy の新種であることが判明したので、ここに *Phumosia viridis* sp. nov. ミドリウリンクロバエ(新称)として記載した。検索表に示したように、体色が緑色であることにより、他の8種の東洋区産のウリンクロバエから容易に区別される。