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LAUXANIIDAE [DIPTERA] OF MALAYSIA (PART 3)

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Abstract

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The validity of certain characters for subfamily classification is discussed, and a tribe, Noonamyiini, is established. Two species, *Cerataulina nigriventris* and *Sapromyza (Sapromyza) albibasis*, in the Lauxaniinae, are described from Malaysia as new to science.

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Contents. 1. Characterization of the tribe Noonamyiini — 2. Descriptions of two new species — References — Appendix : New records of three *Noonamyia*-species.

1. CHARACTERIZATION OF THE TRIBE NOONAMYIINI

The genus *Noonamyia* in the Lauxaniinae was described by Stuckenberg (1971) from the Philippines (type species: *N. palawanensis* Stuckenberg, 1971; collected by the Danish Noona Dan Expedition 1961). Up to the present, nine species have been recorded from the Philippines (Frey, 1958; Stuckenberg, 1971; Okadome, 1982) and from Malaysia (Malay Peninsula and Sabah; Sasakawa and Tho, 1990).

The distinctive characters of the genus are the short posterior fronto-orbital bristles, two long ventral bristles on the second antennal segment and narrow base (alula reduced to a narrow strip) of the wing with conspicuous markings. Also, the absence of acrostichal setae and the marked divergence of third antennal segments were noted by Stuckenberg as generic characters. These characters are, however, not diagnostic, because six rows of the acrostichals are present in the Malaysian *N. abdominalis*, *euphlebia*, *pleuralis* and *sabahna* which were all described by Sasakawa (1990), and the divergence of antennae is seen commonly in the species of the Oriental genus *Phobeticomyia* Kertész (1915).

Stuckenberg (1971) proposed a new subfamily, Homoneurinae, for most of the genera having the black costal spinules continuing to the apex of R_{4+5} (homoneuriform costa) and lacking a discal mesopleural bristle. He also added that most of the homoneuriform genera possess a ctenidium of spinules along the anteroventral line of fore femur, whereas the sapromyziform genera do not. Shewell (1977) placed the genus *Noonamyia* with the sapromyziform costa (costal spinules not reaching apex of R_{4+5}) in the Homoneurinae on account of the presence of two unequal-sized spurs on the mid tibia as a further diagnostic character (one or two short additional mid-tibial spurs are found in the Homoneurinae, but only a single spur in the Lauxaniinae).

I reported that there is an ambivalent state concerning to the extent of costal spinules in the species of two genera, *Noonamyia* and *Trypetisoma*, at a symposium entitled the Diversity in Diptera, XVII Pacific Science Congress (May 1991, Honolulu).

In *Noonamyia*, three Malaysian species, *abdominalis* Sasakawa, *euphlebia* Sasak. and *sabahna* Sasak., have the homoneuriform costa, while five Philippine species, *chujoi* Okadome, *fascipennis* (Frey), *irregularis* (Frey), *lyneborgi* Stuckenberg and *palawanensis* Stuck., and one Malaysian (Bornean), *pleuralis* Sasak., have the sapromyziform costa. Kim (1994) also pointed out a somewhat anomalous position of both genera in the Lauxaniinae or Homoneurinae from the same point of view.

The sapromyziform costa, the absence of a ctenidium on the fore femur, and the presence of a single mid-tibial spur in the Lauxaniinae are considered to be derivative. Although some species of *Noonamyia* have the sapromyziform costa, they are characterized nicely by the presence of a fore-femoral ctenidium and two mid-tibial spurs, as seen in the species of the Homoneurinae. By reason of the above-mentioned characterization, I propose the new tribe Noonamyiini for the genus *Noonamyia* in the Homoneurinae.

2. DESCRIPTIONS OF TWO NEW SPECIES

Cerataulina nigriventris Sasakawa, n. sp.

Diagnosis. This species is characterized by the coloration: three whitish-pollinose stripes on the mesonotum, bicolored (yellow dorsally and brown ventrally) mesopleuron and black abdomen, thus differing distinctly from those of the Philippine *boettcheri* (Frey, 1927) and the Formosan *subapicalis* Hendel (1913).

Female. Head testaceous yellow; frons brown except for yellowish dorsal margin between vertical angles, median longitudinal line below ocellar triangle and ventromedian margin of frontalia, strongly shining, sparsely gray dusted on ventral half; a large black spot which is $\frac{2}{5}$ as high as height of eye in profile below level of anterior *or* and between base of antenna and eye; face glossy black except for yellowish dorsal margin and ventrolateral triangular corners of bulbosity; antenna with first segment yellow, slightly brownish along ventral margin, second and third segments brown excepting ventral margin of third segment yellow, arista and its hairs black; palpus testaceous, darkened apically. Mesonotum pale brown, strongly shining except for median whitish-dusted stripe which is about $\frac{1}{2}$ as wide as distance between *dc*-lines and lateral sparsely dusted ones between *dc*- and *sa*-lines; scutellum brown, densely whitish-dusted; pleura testaceous yellow, very sparsely pollinose; mesopleuron glossy, yellow on dorsal half and pale brown on the ventral; two indistinct and brownish vittae: one transversely at middle of mesopleuron and the other along ventral margin of propleuron to dorsal margin of sternopleuron. Wing very faintly tinged with yellow, with veins pale testaceous but bases of C, R and R₁ yellow; calypter with margin and fringe pale brown; halter yellow, knob pale brown dorsally. Legs testaceous yellow, but fore tibia and tarsus black. Abdomen weakly shiny black, brownish pollinose.

Frons depressed mesally, with ventral part below level of anterior *or* protruded beyond eye margin in profile, as wide as long, about 1.3 times as wide as eye, diverging ventrally; anterior *or* distinctly shorter than the posterior; *oc* absent; eye almost as high as wide; face distinctly convex in profile; gena $\frac{1}{8}$ height of eye; *pm* five to six; first antennal segment as long as the third, second segment $\frac{1}{2}$ of the first; first segment with one and second segment with three long setae near ventral apices; third segment twice as long as wide; arista at middle of third segment, densely but shortly haired.

Mesonotum with 1+2 *dc*, first *dc* subequal to the second, as far apart from suture as the second from that; only one or two pairs of *acr* close to suture, *prsc* distinct but only $\frac{1}{3}$ length of first *dc*. Wing with second costal section 4.4 times as long as the third; r-m at middle of discal cell; ultimate section of M₁₊₂ 2.3 times as long as the penultimate; ultimate section of M₃₊₄ $\frac{1}{4}$ of penultimate. Fore femur without ctenidium of spinules; mid tibia with only one spur; hind tibia with *pd* shorter than that on fore tibia.

Length of body 3.9 mm, of wing 3.5 mm.

Male. Unknown.

Holotype female, Sepilok, Sabah, Malaysia, 7. X. 1988, M. Sasakawa; deposited in collection of the Forest Research Institute of Malaysia (FRIM), Kepong, Selangor.

Distribution. Malaysia (Sabah).

Sapromyza (Sapromyza) albibasis Sasakawa, n. sp.

Diagnosis. This species is unique in having the bicolor wings. It is somewhat related to *S. maquilingsis* Malloch, known from the Philippines, in the coloration of head and the plumosity of the arista, but is distinguishable by the antennae yellow and the thorax black (in the related species, basal two antennal segments black and mesonotum brownish sexvittate).

Female. Head with frons yellow and densely whitish dusted; frontalia with a brown inverted triangle which is separated narrowly from parafrontalia and ventral margin of frontalia; parafrontalia with a brown narrow marking between base of antenna and eye; face whitish, with a brown narrow transverse band at middle; dorsal half of occiput concolorous with frontalia and united with frontal brown area; gena and postgena plae yellow, the latter with ventral margin pale brown; antenna yellow, third segment with apical margin pale brown, arista pale yellowish brown, with basal hairs yellowish; palpus brownish black. Thorax dark brown, mat, densely grayish-white dusted excepting a pair of polished (very sparsely pruinose) stripes behind level of posterior *dc* and between *dc*-line and *prsc*-base; pteropleuron, hypopleuron and pleurotergite yellow; sternopleuron with posterodorsal corner scanty infuscated or yellowish. Wing with brown fascia which is extended more or less obliquely between forking point of R_{2+3} and R_{4+5} and crossvein r-m; the fascia forms boundary between basal white and distal faintly clouded parts; calypter with fringe yellow; halter white but stalk yellowish. Legs yellow; ventral side of fore trochanter, dorsal side and outer distal half of fore femur, outer distal 2/5 of mid femur, outer distal 1/5 of hind femur, base of all tibiae, distal 1/3-1/2 of fore tibia and median 1/5 of mid tibia brown; hind femur with a brown band obliquely at middle of outer side. Abdomen testaceous yellow, third and fourth tergites brown.

Frons 1.5 times as wide as long, about twice as wide as eye, slightly converging ventrally; parafrontalia broadened ventrally, distinctly beyond eye margin in profile; anterior *or* 3/4 of the posterior; face flat, slightly beyond parafacialia in profile; eye slightly higher than broad, broadest on dorsal 1/4 and narrowed ventrally; gena 1/9 height of eye; *pm* four or five; antenna with third segment ovoid, nearly twice as long as wide, narrowing apically; arista plumose, with longest hair as long as width of third segment.

Mesonotum with 0+2 *dc*, six rows of *acr*, *prsc* subequal to inner *pa* which is 1/2 of the outer; posterior *npl* absent. Wing with second costal section about three times as long as the third; r-m at middle of discal cell; ultimate section of M_{1+2} about three times length of penultimate; ultimate section of M_{3+4} slightly shorter than 1/2 of penultimate. Fore femur without ctenidium of spinules; mid tibia with only one spur; hind tibial *pd* absent.

Length of body 1.9 (holotype)-2.0 mm, wing as long as body.

Male. Unknown.

Holotype female, FRIM, Kepong, Selangor, Malaysia, 7. VIII. 1986, M. Sasakawa; deposited in coll. of FRIM. Paratype: 1 ♀, same data as holotype.

Distribution. Malaysia.

REFERENCES

- Frey, R., 1927. Philippinische Dipteren IV. Fam. Lauxaniidae. Acta Soc. Fauna Flora fenn. 56(8): 1-44.
- 1958. Studien über ostasiatische Dipteren VI. Nothybidae, Micropezidae, Opo-
myzidae. Notul. ent. 38: 37-51.
- Hendel, F., 1907. Neue und interessante Dipteren aus dem kaiserl. Museum in Wien. Wien.
ent. Ztg. 26: 223-245.
- 1913. H. Sauter's Formosa-Ausbeute. Acalyptrate Musciden (Dipt.) II. Supplta
ent. 2: 77-112.
- Kim, S.P., 1994. Australian lauxaniid flies: revision of the Australian species of *Homoneura*
van der Wulp, *Trypetisoma* Malloch, and allied genera (Diptera: Lauxaniidae).
Monogr. Inverteb. Taxon. Vol. 1, 445 pp. CSIRO, Australia.
- Malloch, J.R., 1929. Notes on some Oriental sapromyzid flies (Diptera), with particular
reference to the Philippine species. Proc. U.S. natn. Mus. 74(6): 1-97.
- Okadome, T., 1982. A new species of the genus *Noonamyia* Stuckenberg from the Philippines
(Diptera: Lauxaniidae). Spec. Iss. Mem. Retir. Emer. Prof. M. Chûjô, Nagoya, pp.
183-185.
- Sasakawa, M. and Tho Yow Pong, 1990. Lauxaniidae (Diptera) of Malaysia (Part 1).
Esakia, spec. iss. 1: 123-136.
- Shewell, G.E., 1977. Family Lauxaniidae. In Delfinado, M.D. & D.E. Hardy ed.: A Catalog
of the Diptera of the Oriental Region Vol. III, pp. 182-214. Univ. Press Hawaii.
- Stuckenberg, B.R., 1971. A review of the Old World genera of Lauxaniidae (Diptera). Ann.
Natal Mus. 20(3): 499-610.

APPENDIX :

NEW RECORDS OF THREE NOONAMYIA-SPECIES

Noonamyia abdominalis Sasakawa (1990)

Specimens examined. 1 ♂ 1 ♀, Sg. Mengion, nr. Ng. Tekalit, Kapit Dist., Sar-
awak, VIII-IX. 1971, K.J. Frogner.

Distribution. Malaysia (Sabah, Sarawak). New to Sarawak.

N. euphlebia Sasakawa (1990)

Specimens examined. 1 ♂, Doi Suthep, Chiang-Mai Prov., Thailand, 28-31.
III. 1958, T.C. Maa; 1 ♀, Khaochang (200-400 m), Khaophappa Prov., Thailand, 4.
I. 1964, G.A. Samuelson. 1 ♀, Guam, Sedone, Laos, 6. IX. 1967, P.G. Howarth. 1 ♀,
20 km S. of Dalat (1,300 m), Viet Nam, 12. IX. 1960, J.L. Gressitt.

Distribution. Malaysia, Thailand, Laos, Vietnam. New to Thailand, Laos,
Vietnam.

N. pleuralis Sasakawa (1990)

Specimen examined. 1 ♂, Semongok Forest Res., 24 km S. of Kuching, Sar-
awak, 15-20. III. 1968. D.E. Hardy.

Distribution. Malaysia (Sabah, Sarawak). New to Sarawak.