New species of *Eumanota* Edwards, 1933  
(Diptera : Mycetophilidae)

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**Abstract** – An emended diagnosis of *Eumanota* Edwards, 1933 is given. All available material of previously described species has been studied, and three new species are described, *E. malukuensis* from Maluku (Moluccas), Indonesia, *E. racoli* sp. n. from Thailand, and *E. suthepensis* sp. n. from Thailand and Laos. The monotypic genus *Promanota* Tuomikoski, 1966 is considered to be a subjective junior synonym of *Eumanota*. In all, six species are included in the genus, all from the Oriental region.

**EUMANOTA** Edwards

_Eumanota_ Edwards, 1933: 231.

*Promanota* Tuomikoski, 1966 syn. n.

Type species: _Eumanota leucura_ Edwards, 1933, by original designation.


**Emended diagnosis** — _Head_ (figs. 1, 2). Posterior portion of head somewhat conical; row of strong, recurved bristles behind hind margin of eyes. Antenna inserted above middle of head. Scapa and pedicel with small and large setae. Fourteen flagellomeres, all densely clothed with trichia. Flagellum of males about 2 times as long as mesonotum. Three ocelli arranged in straight line, median about half size of laterals. Eyes large, median margin evenly rounded with minute, shallow incision above antennal socket. Eyes with numerous interommatidial setulae. Frons with distinct suture or keel above antennal sockets, and medially produced into distinct frontal tubercle; tubercle with at least some setae. Median lobe of postgena, maxillary segment [following Hoyt (1952) and Matile (1990)], well developed. Face broad, more than 1.5 times as high as wide, with numerous small and large setae. Clypeus small, ovate, twice as wide as long, clothed with small and larger setae. Labrum small and weakly sclerotized. Cibarial pump short and wide. Prementum with one short median apodeme. Stipes elongate, well sclerotized, each with several minute and, at least in some species, with one strong bristle. Lacinia not observed. Labella small. Palpus with four visible palpomeres, probably due to secondary fusion, or loss of palpomere 1 or 2; “first” palpomere small, hardly visible in dry-mounted specimens. Palpomere 3 somewhat flattened, more or less triangular with median large, circular sensory pit. Palpomere 4 about twice as long as palpomere 3. Palpomere 5 very thin and long, 5 to 6 times as long as palpomere 4.

_Thorax_ (fig. 3). Antepronotum and proepisternum well separated by thin suture, both with numerous small and some large setae; no distinct suture between proepisternum and proepimeron. Basisternum large, shield-like, situated immediately beyond proepisternum, setose with several ventrally projecting setae along ventral border. Anepisternum ovate, with numerous minute setae on upper half and along anterior border; uppermost part also with...
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Figures 5-7
Terminalia of Eumanota leucura Edwards, 1933; holotype, male. - 5, gonocoxites, ventral view. - 6, gonocoxites, dorsal view; tergite 9 and proctiger removed. - 7, tergite 9 and proctiger, dorsal view.

some strong setae. Anapleural suture incomplete. Preepisternum 2 and anepimeron both bare, pleural suture indistinct; preepisternum 2 partly covering basal portion of mid-coxa. Both anterior and posterior basalare well developed, both elongate. Laterotergite oval, protruding, with several small and some strong setae posteriorly. Mediotergite, metepisternum and metepimeron all bare. Scutum densely clothed with minute setae; some strong setae laterally. Scutellum with 6-10 strong, projecting bristles and usually several smaller lateral setae.

Wings (fig. 4). Wing length about 3.0 to 3.6 times as long as femur of fore leg (profemur). Wing membrane clear or distal half slightly obscured; posterior half with numerous minute, dorsal setae. Subcostal sclerite elongate, with some large setae. Stem vein with several setae. Distal median plate bare. Costa produced well beyond apex of R5. Sc1 short, ending in R; Sc2 absent. Rs short, nearly vertical, bare. R1 short. Vein ta between 1.5 and 2.0 times as long as R1. Media with short common stem; basal most part of M1 weakly sclerotized. Two cubital veins runs separate from basis of wing. Anal vein well developed, bare or setose. CuP as weak fold between anal vein and CuA2. Where nothing else is stated above, all veins with numerous dorsal setae; R also with ventral setae.

Legs. Fore leg with tibia distinctly shorter than femur; antero-apical depressed area with numerous, evenly dispersed trichia. Tibiae and tarsomeres all with trichia arranged in regular rows; tibiae with several small setae, not longer than tibial diameter. Spurs well developed. Empodium well developed. Two tarsal claws, each with one large and, usually, one minute, more blunt, ventral tooth.

Abdomen. Abdominal segments 1-6 well developed, segments 7 and 8 distinctly reduced. Both sexes with well developed proctiger, protruding well beyond tip of gonocoxites in males. Cerci densely clothed by light, silky trichiae and a few setae.

Remarks - Tuomikoski (1966), in describing Promanota, probably never studied any species of Eumanota. As he seemingly was not aware that both E. humeralis and E. leucura had setae on most of the wing membrane, he must have relied on Edwards’ original descriptions where this fact is not stated unambiguously. Promanota malaisei probably differs from the species described in the present paper in having a narrower face and a shorter palpomere 5. However, the additional diagnostic characters mentioned by Tuomikoski (1966), “less marked bristles round the orbits … almost bristly mesanepisternum, shorter front coxae” remain dubious. Consequently, at present there are no good reasons for retaining Promanota as a distinct genus.
**Eumanota leucura** Edwards, 1933
(figs. 5-7)

*Eumanota leucura* Edwards, 1933: 232


**Diagnostic characters** – The only species with a long, straight gonostylus with a rounded apex. Ventral portion of paramere very short with long, curved, filiform setae.

**Description** – A detailed description of the external morphology of *E. leucura* is provided by Edwards (1933: 232) and not repeated here.

*Male* (Holotype): Wing length 4.30 mm, or 3.0 times as long as profemur.

*Head.* Length of flagellum 2.40 mm or 1.9 times as long as mesonotum.

*Thorax.* Length of mesonotum 1.28 mm. Wing. Vein ta 1.0 times as long as R1 and 3.3 times as long as stem of median fork. Vein tb 1.6 times as long as vein ta. Anal vein 0.6 times as long as CuA2, bare. *Legs.* Ratio of femur to tibia for leg 1 to 3: 1.60, 0.85, 0.75. Ratio of tibia to first tarsomere for leg 1 to 3: 0.90, 1.45, 1.80. Spur lengths for legs 1 to 3 in relation to tibial diameter, measured apically: 2.9; 2.5, 3.8; 2.5, 3.6.

*Terminalia.* Gonocoxites ventrally fused for less than 1/2 of their length, slightly diverging posteriorly; dorsal border with numerous setae distally. Gonostyly elongated, apex rounded with numerous curved setae. Parameres with ventral portion short and stout with dense collection of curving, filiform setae apically; dorsal portion with distinct dorsal keel and 3-4 setae. Aedeagus broad and stout, pointed. Tergite 9 about as long as broad, distal width 0.5 times width basally. Length of tergite 9 and proctiger 1.4 times length of gonocoxites.

**Distribution** – Malaysia, Borneo.

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**Eumanota humeralis** Edwards, 1933
(figs. 8-10)

*Eumanota humeralis* Edwards, 1933: 232

**Material examined** – Holotype (♂), by original designation: Malaysia, Sabah, Borneo, Mt. Kinabalu, Kenokok (3,200 ft.), 24 April 1929, H. M.
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Diagnostic characters – Broad, more or less triangular gonostylus with a sharp distal point. Dorsal portion of paramere minute, visible as a blunt swelling only.

Description – A detailed description of the external morphology of E. humeralis is provided by Edwards (1933: 232) and not repeated here.

Male (Holotype): Wing length 3.30 mm, or 3.0 times as long as profemur.

Head. Length of flagellum 1.90 mm or 1.85 times as long as mesonotum.

Thorax. Length of mesonotum 1.05 mm. Wing. Vein $ta$ 1.5 times as long as $RI$ and 2.9 times as long as stem of median fork. Vein $tb$ 1.4 times as long as vein $ta$. Anal vein 0.5 times as long as CuA2, with some dorsal setae. Legs. Ratio of femur to tibia for leg 1 to 3: 1.50, 0.85, 0.70. Ratio of tibia to first tarsomere for leg 1 to 3: 0.90, 1.45, 1.90. Spur lengths for legs 1 to 3 in relation to tibial diameter, measured apically: 3.6; 2.3, 4.2; 3.3, 5.0.

Terminalia. Gonocoxites fused for about 1/2 of their length ventrally; dorsal border of gonocoxite with numerous setae. Gonostylus broad, nearly triangular with sharp distal point. Parameres with ventral portion slender and curved with numerous long, translucent setae apically; dorsal portion blunt and swollen, bare. Aedeagus relatively broad, with pointed apex. Tergite 9 somewhat longer than broad. Length of tergite 9 and proctiger 1.4 times length of gonocoxites.

Distribution – Malaysia, Borneo.

Eumanota malaisei (Tuomikoski, 1966), comb. n.

Promanota malaisei Tuomikoski, 1966: 216.

Type material – According to Tuomikoski (1966: 218) the description was based on 5 males collected in NE Burma, Kambaiti, May 11 and June 4, 1934, R. Malaise.

Remarks. Nothing is mentioned about the place of deposition in the original description. The specimens have been search for, in vain, at the Finnish museum of natural history, Helsinki, Swedish museum of natural history, Stockholm, and at The natural history museum, London.

Diagnostic characters – According to Tuomikoski (1966) this appears to be the only species with a narrow face ("face
narrow, a little wider below”) and a short 5. palpomere (“somewhat longer than the preceding [palpomere”).

Description – A description with fairly good drawings of the wing and the male genitalia is given by Tuomikoski (1966: 215-218, figs. 1, 2, 5).

Distribution – Burma.

Eumanota malukuensis n. sp. (figs. 11-13)


Diagnostic characters – The only species with a slender gonostylos, ending in a tip equipped with 2 dark setae.

Description – Male (Holotype). Total length 4.30 mm. Wing length 3.65 mm, or 2.8 times as long as mesonotum. Frontal tubercle with 2 distinct, dark setae, frons bare in front of ocelli. Face and clypeus brown with numerous dark setae. Face 1.7 times as long as wide. Mouthparts and palpomeres light yellowish.

Thorn. Length of mesonotum 1.15 mm. Pronotum and propleuron brown, with several dark setae. Mesonotum brown, somewhat lighter at shoulders; scutellum with 6 strong setae and some additional small setae laterally. Mesothoracic sclerites light brown; anepisternum with several minor setae along anterior border and on upper half. Mediotergite and laterotergite brown, latter with numerous small and some larger setae. Metathorax light brown, bare. Halter whitish. Wing. Distal half brownish. Vein ta 1.6 times as long as RI and 5.4 times as long as stem of median fork. Vein tb 1.4 times as long as vein ta. Anal vein 0.6 times as long as Cua2, bare. Legs. Coxae yellowish, slightly darkened apically. Femora light brown, tibiae and tarsi light, brown to yellowish with trichia and setae in regular rows. Leg ratios for fore leg (remaining legs missing): femur to tibia 1.55; tibia to first tarsomere 0.75; spur length 3.7.

Abdomen and terminalia. Both sternites and tergites brown. Gonoxocites fused for about 2/5 of their length ventrally; dorsal border of gonoxocite with well sclerotized portion above gonocoxal apodemes, bordered by several long setae. Posterior border of gonoxocites bare, with sharp corne. Gonostylos slender, slightly bent with 2 dark setae apically, one distinctly longer than the other. Parameres with ventral portion long and slender with a short row of membranous setae apically, dorsal portion broad with one setae only. Aedeagus slender, protruding beyond tip of parameres. Tergite 9 distinctly elongated. Total length of tergite 9 and proctiger 1.6 times length of gonoxocites.

Etymology – From the type locality, Maluku (Moluccas).

Distribution – Indonesia, Maluku.

Eumanota racola n. sp. (figs. 14-16)


Diagnostic characters – Very close to E. sutchepensis, but can be identified by the less pronounced posterior, ventromedian corner of the gonoxocites; also the gonostylos is not produced into a small hook distally.

Description – Male (n=2). Total length 3.45 – 3.55 mm. Wing length 2.75-3.05 mm, or 3.05-3.45 times as long as forefemur.

Head. Head capsule light brown to yellowish, darkened at top, around ocelli. Length of flagellum 2.00-2.05 mm or 2.0-2.4 times as long as mesonotum. Frontal tubercle with 3 distinct dark setae; frons yellowish and bare in front of ocelli. Face and clypeus yellowish with several setae. Face 1.7-2.0, times as long as wide. Mouthparts and palpomeres light yellowish.

Thorn. Length of mesonotum 0.90 mm. Pronotum and propleuron yellowish, with several setae; setae long lower border dark. Mesonotum light brown, yellowish towards and at shoulders, somewhat darkened medially and posteriorly; except for some lateral setae, densely clothed with minute setae. Scutellum brown, with 8-10 strong setae and some additional small setae laterally. Median fork. Vein ta 1.6-1.7 times as long as RI and 3.9-4.1 times as long as stem of median fork. Vein tb 1.7-1.8 times as long as vein ta. Anal vein 0.5-0.6 times as long as Cua2, 6-11 dorsal setae. Legs. Coxae yellowish, slightly darkened apically. Femora light brown, tibiae and tarsi light brown to yellowish. Ratio of femur to tibia for leg 1 to 3: 1.40-1.45, 0.80-0.90, 0.75-0.80. Ratio of tibia to first tarsomere for leg 1 to 3: 0.90-0.95, 1.40, 1.90-2.00. Spur lengths for legs 1 to 3 in relation to tibial diameter, measured apically: 3.2-3.3; 1.7-2.0, 3.2-3.8; 2.7-3.0, 4.0-4.3.
Abdomen and terminalia. Both sternites and tergites brown. Gonocoxites ventrally fused for about 1/2 of their length; dorsal border of gonocoxite with well-defined posterior corner with numerous setae. Gonostylus broad, more or less triangular and relatively flat. Parameres with ventral portion long with numerous translucent setae apically; dorsal portion broad with 5-6 setae. Aedeagus relatively broad, protruding beyond tip of parameres. Tergite 9 about as long as broad. Length of tergite 9 and proctiger 1.6 times length of gonocoxites.

Etymology – From Koh Ra (Ra Island), the type locality, and from Latin, -cola, inhabitant.

Distribution – Thailand.

Eumanota suthepensis n. sp.
(figs. 1-4, 17-19)


Diagnostic characters – Close to E. racola, but dorsal border of gonocoxite with a well-defined, nearly knob-like posterior corner with numerous thin setae.

Description – Male (n=2). Total length 4.25-4.70 mm. Wing length 2.95-3.05 mm, or 3.0 times as long as pronotum.

Thorax. Mesonotum, most of mesopleuron, laterotergite and mediotergite brown. Prothorax light brown, katepisternum whitish. Scutellum with 8 strong, erect setae and several smaller laterally. Anepisternum with 2-3 strong setae on uppermost part. Halteres whitish. Wing. Vein ta 1.6-1.7 times as long as R1 and 2.9-3.2 times as long as stem of median fork. Vein tb 1.5-1.7 times as long as vein ta. Anal vein 0.6 times as long as CuA2, bare. Legs. Coxae whitish, except for brown apices; tibia and tarsi light brown. Ratio of femur to tibia for leg 1 to 3: 1.40-1.45, 0.80-0.90, 0.75. Ratio of tibia to first tarsomere for leg 1 to 3: 0.95, 1.40-1.45, 2.05. Spur lengths for legs 1 to 3 in relation to tibial diameter, measured apically: 3.3-3.5; 2.0, 3.8-4.2; 2.6-3.0, 4.2-4.7.

Abdomen and terminalia. Brown, sternites with lateral
margins light brown. Gonocoxites ventrally fused for about 1/3 of their length; dorsal border of gonocoxite with well demarked, nearly knob-like posterior corner with numerous thin setae. Gonostylus broad, rounded; distal portion bent downwards, forming a small hook. Parameres with ventral portion long with numerous translucent setae apically; dorsal portion broad with 5-6 setae. Aedeagus long and broad, protruding beyond tip of parameres. Tergite 9 elongated, broadest basally; length of tergite 9 and proctiger 1.6 times length of gonocoxites.

**Etymology** – Named after the type locality, Doi Suthep (Suthep Mountain).

**Distribution** – Thailand and Laos.

**DISCUSSION**

The new species here described are clearly closely related to the two species previously ascribed to *Eumanota*; unfortunately their relationship to *E. malaisei* cannot be established until new material of this species is available.

Of the two genera *Eumanota* and *Manota*, the latter is undoubtedly the most apomorphic, visible, among other characters, in the strongly reduced wing venation. Nevertheless, both genera have several unique characters in common, presumably good synapomorphies, e.g. a broad, rectangular and setose face, a reduced prementum with one minor median apodeme, and a well developed median lobe of the postgena. Other characters, like the row of strong bristles bordering the back of the head and, to a certain extent, the regular arrangement of the tibial and tarsal trichia are probably less unique. One or both of these features are expressed in representatives among the Leiini. *Sticholeia* Söli, 1996 has both, and seems to confirm the close relationship between “Manotinae” and the tribe Leiini. Interestingly, *Sticholeia* has also an outline of basisternum 1 quite similar to that in *Eumanota*. For a more detailed discussion of these features, see Söli (1996).

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REFERENCES


