

SYNOPSIS OF COPTOPHLEBIA, WITH DESCRIPTIONS OF
NEW AMERICAN AND ORIENTAL SPECIES
(Diptera, Empididae)

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In 1909 Dr. Mario Bezzi erected the subgenus *Coptophlebia* of the genus *Empis* as a rather well limited group mainly characterized by having the fourth vein incomplete. Some of the species show great sex dimorphism, especially those whose females have developed elaborate rows of scales on various parts of the legs. This diversity in the sexes makes it difficult to associate the females with their appropriate males. There are some fourteen species occurring in Europe, several in Africa, a dozen described from the Orient and nine from North America. I have four additional species from America, which prompted the present study. Among some Oriental flies received from Professor J. L. Gressitt there are several undescribed *Coptophlebias*, which for convenience have been added to the key. It seems that in the Orient the range of permutations of characters will afford an abundant supply of species of this group.

The species here considered agree closely in the chaetotaxy of the head and body, but differ widely in the bristles of the legs. In general, the occipital hairs are rather sparse and short and the thoracic bristles are fine, with almost no dorsal hairs between. Usually there are 1 hum, 1 phum, 2 or 3 npl, 1 sa, 1 pa, and a pair of cruciate sc. The size and number of do and ac hairs should be noted.

The types of the new species are in my collection, except those of *anthophila* and *thyasotes*, which are in the United States National Museum.

KEY TO THE AMERICAN AND THE NEW ORIENTAL SPECIES OF
COPTOPHLEBIA

1. Males: eyes contiguous; legs not squamose.....2
- Females: eyes separated; legs often squamose.....17

2. Front metatarsus produced beyond insertion of second joint as a finger-like apophysis; bristles and hairs of body whitish, no acrostichals; body heavily white-cinereous; wings hyaline, veins pale; halteres pale yellow; antennal style as long as third joint. (Ont., Alta.).....*dactylica*, n. sp.
- Metatarsus not produced over second joint; bristles and hairs blackish, acrostichals biseriate, sometimes very sparse; body black, more or less shining.....3
3. Wings hyaline but spotted with brown; anterior branch of third vein perpendicular, discal cell truncate.....4
- Wings more or less uniformly hyaline or brownish, but not spotted; anterior branch of third vein usually somewhat curving to costa.....5
4. Fourth vein with a spur near middle of second posterior cell, marginal cell at stigma wider than submarginal, first submarginal cell open; pygidium large and globose (Mex.).....*spiloptera* Wiedeman
- Fourth vein without spur; first submarginal cell usually closed, stigma elongate, narrow, apically tapering far from end of cell, marginal cell at stigma not wider than submarginal; pygidium small. (Ohio, S. Dak., Mo., Tex.).....*clausa* Coquillett
5. Sixth sternite produced backwards as a long narrow process tipped with hairs (Fig. 3), seventh sternite with a strong ventral apophysis, penis-sheath large and with posterior fringe of long hairs; coxae, femora and anterior tibiae luteous, tarsi and hind tibiae fuscous, densely hairy. (Tex.)....*plectrum* n. sp.
- No ventral processes on abdomen; legs piceous or black, except in *dolorosa*.....6
6. Anterior metatarsi slender, as long as their tibiae; submarginal cells wider than first posterior cell, third vein strongest and ending beyond wing-tip; palpi yellow; body of pygidium with coarse downward-directed bristles (Fig. 2), the valve with a single heavy incurved bristle above toward base and with deflected fleshy terminal flap.....7
- At least middle metatarsi much shorter than their tibiae; first submarginal and first posterior cells subequal in width, third vein scarcely thicker than second and ending at wing-tip; pygidium of other structure.....8
7. Proboscis 2.5 times as long as head-height. (Conn., Ga., Tex.).....*distans* Loew
- Proboscis 4 times as long as head-height. (D.C.)...*labiata* Loew
8. Pygidium more or less obliquely ascending or minute; legs rarely excessively hairy, usually with bristles, all metatarsi rarely thicker than their tibiae.....9

- Pygidium large and globose (Fig. 6), lateral valves hemispherical; legs without bristles but with abundant very long fine hairs especially on posterior tibiae and the tumid metatarsi. (Col., N. Mex.) (*hirtipes* Coq., not Wied.; *tenebrosa* Coq. 1903 not 1895).....*hirticrus* Melander
- 9. Anal vein reaching margin, wings more or less infumated; penis yellow10
- Anal vein evanescent, stopping much before margin; wings hyaline or nearly so; penis usually black or fuscous.....13
- 10. Middle legs and front femora luteous; metatarsi not dilated; hairs rather sparse. (Mex.).....*dolorosa* Wheeler and Melander
- Legs piceous or black.....11
- 11. Third vein forked before end of second vein, sections of fifth vein equal; legs hairy rather than bristly, the tibiae and tarsi with setae, underside of middle femora with full double row of very long setiform hairs, front metatarsi tumid, the three following joints spherical. (Tex.).....*asema* Melander
- Third vein forked opposite or beyond end of second vein, last section of fifth vein longer than preceding; legs bristly rather than hairy, the hairs of legs in general short, front metatarsi slender12
- 12. No flexor setae on distal half of middle femora. (Mex.).....*totipennis* Bellardi
- Flexor setae of middle femora extending almost to apex. (Tex., N. Mex.) (If middle femora have only 2 or 3 flexor hairs and upper edge of middle valve of pygidium is not deeply excised, see *impar*, couplet 15.).....*anthophila*, n. sp.
- 13. Front tarsi not feathered14
- Front tarsi greatly deformed, the last three joints wider than long, the third and fourth joints tipped above with long close-set transverse fringe of black hairs. (China).....*ostentator*, n. sp.
- 14. Front metatarsi nearly as long as their tibiae, the hairs long, hind tarsi with first three joints somewhat tumid, hind tibiae long-ciliate beneath; wings lightly infumated. (Java).....*thiasotes*, n. sp.
- Front metatarsi much shorter than their tibiae; wings glassy hyaline.....15
- 15. Lateral valves of pygidium fused above, penis nearly as thick at end as at base. (Costa Rica).....*impar*, n. sp.
- Valves of pygidium not fused, penis very thin.....16
- 16. Legs with few hairs, the bristles shorter and stronger; pygidium minute and closed; sections of fifth vein equal. (China).....*sinensis*, n. sp.
- Legs with many hairs and very long radiating setae; pygidium vertically gaping (Fig. 5); penultimate section of fifth vein somewhat longer than ultimate. (China).....*hyalea*, n. sp.

17. Anal angle of wing not developed; body and legs testaceous, thorax marked with three pairs of velvety-black spots; front opaque. (China).....*poecilosoma*, n. sp.
 - Anal lobe full, set off by an acute axillar notch; body and legs black; front shining (dull only in *squamipes*).....18
18. Wings hyaline, spotted with brown along crossveins, etc., anterior branch of third vein perpendicular; legs heavily pennate with scales.....19
 - Wings not spotted, more or less uniformly fuliginous or hyaline.....20
19. Fourth vein with spur near middle of second posterior cell, second vein curving forward at tip to end much before anterior branch of third vein. (Mex.).....*spiloptera* Wiedemann
 - Fourth vein without spur, second vein nearly straight and receiving anterior branch of third vein. (Ohio, S. Dak., Tex.)
*clausa* Coquillett
20. Some of the legs bearing large scales.....21
 - Legs devoid of pennate scales; anal vein evanescent. (China)
30
21. Third vein ending beyond wing-tip, its anterior branch forming almost an equilateral triangle of the second submarginal cell.....22
 - Third vein ending at wing-tip, its anterior branch forming the shortest side of the second submarginal cell.....23
22. Only the four posterior femora and tibiae with scales on both sides (D. C.).....*labiata* Loew
 - Front tibiae except at base and four posterior femora pennate on both edges, the four posterior tibiae usually pennate above only; second basal cell much longer than first and pointed, the sections of fifth vein about 1:2. (Conn., Ga., Tex.)
*distans* Loew
23. Anal vein attaining margin, wings more or less darkened...24
 - Anal vein evanescent, not reaching margin, wings hyaline at least posteriorly; hind femora and tibiae heavily squamose on both edges28
24. Front femora and hind tibiae not pennate, scales elsewhere short; proboscis about four or five times head-height. (Col., N. Mex., Ariz.).....*hirticrus* Melander
 - Front femora with scales below, scales of posterior femora and tibiae long; proboscis shorter.....25
25. Metatarsi with scales above; underside of discal cell much shorter than last section of fifth vein, posterior crossvein oblique, third vein forked nearly opposite end of second vein, wings distinctly infumated. (Tex., N. Mex.) *anthophila*, n. sp.
 - Metatarsi without scales.....26
26. Third vein forked much beyond end of second vein, its anterior branch nearly perpendicular, sections of fifth vein equal; alulae black. (Costa Rica).....*impar*, n. sp.

- Third vein forked nearly opposite end of second vein, its anterior branch oblique; alulae fuscous.....27
- 27. Underside of the rather blunt discal cell as long as last section of fifth vein and much longer than posterior crossvein; hind metatarsi less than half as long as their tibiae and almost without setae; wings subhyaline. (Tex.) (If underside of discal cell is but slightly longer than posterior crossvein, see *anthophila*, var.).....*asema* Melander
- Underside of discal cell shorter than last section of fifth vein and about equal to the oblique posterior crossvein, wings distinctly infumated; hind metatarsi fully half as long as their tibiae and provided with coarse hairs and setae above. (Mex.)*totipennis* Bellardi
- 28. Front polished; front legs without scales; proboscis 2.5 times as long as head-height.....29
- Front opaque; underside of front femora and apical third of outer side of front tibiae with narrow scales, middle femora and tibiae heavily squamose; proboscis 5 times the head-height. (Mex.).....*squamipes* Coquillett
- 29. Middle femora squamose above only, middle tibiae not scaled; wings subhyaline. (China).....*ostentator*, n. sp.
- Middle femora and tibiae heavily squamose on both edges, hind metatarsi with scales above; wings infumated. (Hainan Island).....*multipennata*, n. sp.
- 30. Extensor bristle near middle of hind metatarsus at least twice the diameter of the joint. (China).....*hyalea*, n. sp.
- Extensor bristle near middle of hind metatarsus about as long as diameter of the joint. (China).....*sinensis*, n. sp.

DESCRIPTIONS OF NEW SPECIES OF COPTOPHLEBIA

A. North American Species

Empis (Coptophlebia) *anthophila* Melander, new species

Black or more or less piceous, lightly gray-pruinose. Proboscis about three times the head-height. About twelve irregularly bi-seriate dorsocentrals, a very few hairs on humeri, metapleural hairs bunched. Abdominal hairs long, fine and loose; lateral valves of pygidium excised apically (Fig. 4) below which the broadly triangular extension infolds over the penis. Middle tibiae with five long extensor bristles, hind femora with an antero-dorsal row of twelve setae, the hind tibiae with a double extensor row of about twelve long setae and underneath with a full series of about twenty-six setulae which become longer on apical half, anterior tarsi setulose and openly setose, hind metatarsi with plantar setulae and long-setose above, stouter than the anterior metatarsi. Wings lightly infumated, subhyaline, stigma very weak, veins

fuscous, paler toward base, third vein forked beyond end of second vein, last section of fifth slightly though distinctly longer than preceding section, the ratio 6:7; alulae fuscous, fringe black. Length 5.5 mm.

Female. Abdominal hairs short, about half as long as the intermediate segments. Scales of femora and tibiae strong, absent on upper side of front femora, hind metatarsi about half as long as their tibiae, with four or five bristles in addition to the dorsal scales.

Holotype and *allotype*: RIO RUIDOSO, White Mountains, NEW MEXICO, alt. 6500 feet, 22 VII (C. H. T. Townsend, U.S.N.M.). *Paratypes*: twelve males and twelve females with the type lot and from LAS VEGAS HOT SPRINGS, NEW MEXICO, 11 VIII (H. S. Barber), ROZIADA, NEW MEXICO, 8 VIII (T. D. A. Cockerell), "TEXAS" (G. W. Belfrage) and AUSTIN, TEXAS, 1 V (ALM). Professor Townsend collected the White Mountains specimens from flowers of *Rhus glabra*, *Solidago trinervata*, *Prunella vulgaris*, *Eriogonum vegetius* and *Potentilla hippiana*.

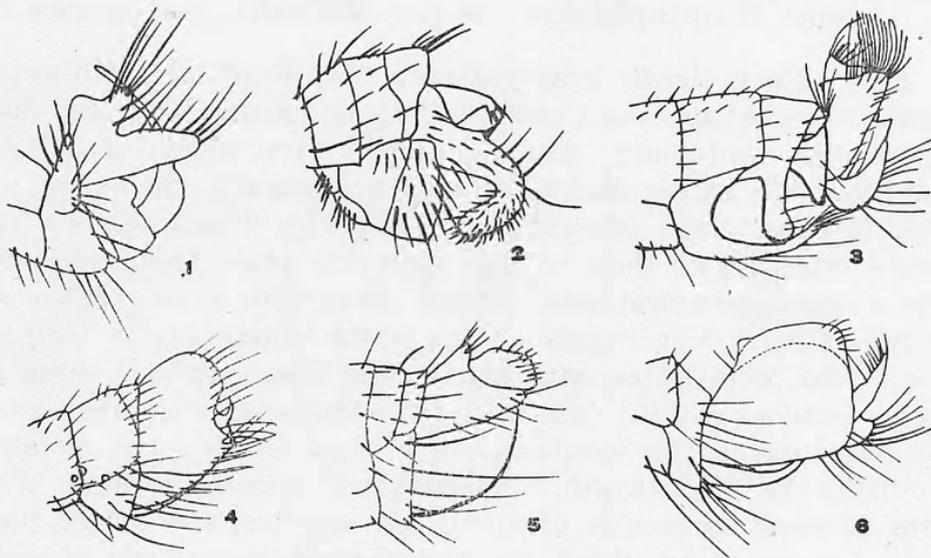
Four females, taken with the others at Rio Ruidoso and undoubtedly belonging with them, show a leaning toward *asema* in that the metatarsi lack scales and the wings are subhyaline with the sections of the fifth vein more nearly subequal. However, they can be distinguished from *asema* in that the hind metatarsi are fully half the length of their tibiae and show three or four exterior bristles, and the underside of the discal cell is only slightly longer than the posterior crossvein.

Asema, *anthophila* and *totipennis* form a group of closely related species which are not easy to separate unless one has specimens of all in order to check relative differences.

Empis (*Coptophlebia*) *dactylica* Melander, new species

Male. Black, densely coated with cinereous pollen which is almost white on abdomen; hairs and bristles of head, body and femora white. Antennae black, third joint lanceolate and not excised below, two and one-half times as long as basal depth and equal to the basal joints together; proboscis three times the head-height. Dorsocentrals in two diverging rows, the rear two longer; a small lateral bristle on scutellum in addition to the apical cruciate pair; the usual lateral notal bristles are long and delicate, with very few small scattered hairs between, humeri with seven hairs. Vestiture of abdomen rather abundant, the hairs of intermediate segments one-third the length of the segments; pygidial valves black, not cinereous, small and widely open, the middle valve deeply excised above

(Fig. 1), almost splitting it in two; penis pale yellow, short, slender, erect, slightly bent forward at middle above the pellucid bulbous base. Legs slender, piceous, not pollinose, hairs pronounced and dark, more conspicuous on extensor side of front legs, the hairs of femora short and pale; front tibiae with outstanding hairs, posterior tibiae with inconspicuous hairs, each with about three longer hairs on extensor side; all tarsi more slender than their tibiae, second joint of tarsi half as long as the metatarsi, the two together as long as their tibiae, front metatarsi continued beyond insertion of second joint as a dorsal hairy process three-fifths the



PYGIDIAL CONFORMATIONS IN COPTOPHLEBIA

Fig. 1, *dactylica*, n. sp. Fig. 2, *labiata* Loew (cotype). Fig. 3, *plectrum*, n. sp. Fig. 4, *anthophila*, n. sp. Fig. 5, *hyalea*, n. sp. Fig. 6, *hirticus* Melander.

length of the second joint, above with long setose hairs, those of the terminal process forming an appressed apical brush in the Alberta specimens, but the type with only two diverging long apical setae. Wings hyaline, veins light brown, stigma colorless, discal cell subequal in length to the intercalary vein, third vein forked a little beyond end of second vein, the branch straight and oblique, sections of fifth vein proportioned 4:5, anal vein thin but reaching margin; halteres, alulae and root of wing whitish yellow. Length 4 mm.

Type: CHARLTON, ONTARIO, 29 July, 1930 (H. S. Parish, collector). *Paratypes*: another male taken with the type and four males collected by Professor E. H. Strickland, at NORDEGG, 26 July, 1936, and WABAMUN, 2 August 1938, all in ALBERTA. The species name refers to the prominent finger-like process of the front tarsus.

The discovery of a white-haired *Coptophlebia* necessitates re-numbering part of the table of *Empis* in the Transactions of the American Entomological Society, XXVIII, on page 284. The second part of couplet 1 should lead to 31 in order to consider the *Coptophlebias* before the white-haired species. Then the second half of couplet 31 on page 286 should lead to 21 on page 350 and the second half of that couplet should lead back to 39 on page 286.

Empis (*Coptophlebia*) *impar* Melander, new species

Male. Black, lightly gray-pollinose. Center of face shining; antennae missing; proboscis twice as long as head-height. Ten dorso-centrals, two scutellars. Abdomen nearly bare; pygidium obliquely ascending, the valves slightly emarginate apically, the caudal apex with infolded comb surrounding the penis. Front femora bare, middle femora with three or four posterior setae; front tibiae with only a small preapical seta, middle tibiae with a long flexor seta at two-fifths, a long extensor seta at the middle and a long preapical seta, hind tibiae with about eight long extensor setae and closely setulose within; front metatarsi three-fifths as long as tibia and with only a few setulae, middle tarsi slender, the metatarsi two-fifths the tibial length, hind metatarsi somewhat tumid. Wing-veins fuscous, upper side of discal cell and first and second posterior veins very faint, third vein forked much beyond end of second vein, the branch erect and straight, the costal ratio of the two submarginal cells 1:3, sections of fifth vein equal, anal vein represented by a fold; halteres piceous, alulae fuscous, the hairs black. Length 3.75 mm.

Holotype: PEDREGOSA, COSTA RICA, collected by D. L. Rounds.

Two females from La Suiza de Turrialba, Costa Rica, April 1922, received from Pablo Schild, may be assigned to this species, in lack of information to the contrary. They differ, of course, strikingly in the dimorphic characters, such as the pennate legs and infumated wings, but otherwise agree fairly well. Both front and face shining; third antennal joint constricted beyond the pyriform base, the style one-half the length of the third joint; proboscis three times the head-height. Underside of front femora with short close scales, both sides of posterior femora heavily scaled, both sides of front tibiae with moderate closely-set scales, outer side of middle tibiae and inner side at base closely pennate, both edges of hind tibiae heavily pennate. Wings dark fuscous, fourth vein thin but evident, basal half of anal vein chitinized, becoming evanescent to margin.

***Empis (Coptophlebia) plectrum* Melander, new species**

Male. Black, almost shining, the occiput and thorax very lightly cinereous. Third antennal joint slender, lanceolate, not excised below, four times as long as depth, the style half the length of the third joint; proboscis three times the head-height. Four scutellars, the lateral ones two-thirds the length of the apical pair, acrostichals very sparse. Hairs of abdomen delicate, short and scattered; pygidial valves not excised above, apically with a crowning comb of incurving hairs (Fig. 3). Middle femora setose beneath, otherwise the legs without setae, the usual series of about a dozen under the hind femora represented by delicate hairs, extensor hairs of tibiae close, those toward apex about three times the diameter of the joint, front and hind metatarsi swollen, the hind ones three-fifths the length of the tibia. Wings moderately infumated, veins dark castaneous, scarcely paler at base, stigma very long, brown, filling the apical two-fifths of marginal cell, third vein forked much before end of second vein, the branch nearly straight, at an angle of sixty degrees, the costal ratio of the two submarginal cells 1:4, sections of fourth vein proportioned 1:3.5:6, of fifth vein subequal, anal vein very weak, subinterrupted before end; halteres and alulae dark fuscous. Length 3.5 mm.

Holotype: AUSTIN, TEXAS, October, 1899 (A. L. Melander).

B. Oriental Species***Empis (Coptophlebia) hyalea* Melander, new species**

Male. Black, thorax distinctly dusted with gray, scarcely shining, notal bristles long. Hairs of occiput sparse but rather long, placed in two whorls; third antennal joint emarginate below, the style half as long as the third joint; proboscis twice as long as head-height. Five dorsocentrals, only two pairs of acrostichals, two scutellars, seven metapleural hairs, a pair of long setae on prescutellar area inside the dorsocentral rows. Abdomen subshining, hairs black; upper valves of pygidium small, almost semi-circular, lower valves vertical, triangular, hairy posteriorly, penis free, arcuate, thin, usually brown (Fig. 5). Legs piceous, the knees and bases of joints of middle tarsi paler, apex of hind tibiae and hind tarsi incrassate; front femora bare, middle femora beneath with a very long seta at two-fifths as well as a loosely spaced double series of fine hairs, hind femora above with decumbent hairs becoming coarser apically, beneath with open double row of fine hairs and on outer side with three or four rather long setae; hairs of front tibiae coarse and setiform on distal half, of posterior tibiae mixed with excessively long radiating setae; all tarsal joints except the fifth with excessively long setae, even on plantar faces, the front metatarsi three-fifths as long as their

tibiae, middle metatarsi two-fifths the length of their tibiae and equal to the next joint, hind metatarsi nearly three-fifths their tibiae; pulvilli golden. Wings glassy hyaline, stigma almost invisible, veins pale yellow, the posterior veins translucent, third vein branched beyond end of second vein, the branch perpendicular but arcuate, the costal ratio of the submarginal cells 1:3.5, anterior crossvein at basal sixth of the discal cell; stem of halteres fuscous; alulae pale yellow, the fringe brown. Length 3.25 mm.

Female. Wings fuliginous, veins fuscous, alulae pale fuscous. Legs simple, not incrassate and not squamose, the setae greatly reduced and normal.

Holotype: TSIN LEONG SAN, E. Kwantung, S. CHINA, 5 June 1936 (J. L. Gressitt); *allotype*: same, 7 June. *Paratypes*: seventeen males and fourteen females, same, 1 to 7 June.

Apparently close to the Formosan *E. (C.) tenuinervis* Bezzi, which however is shining black, has a straight fork to the third vein, elongated pygidial valves and much longer proboscis.

Empis (Coptophlebia) multipennata Melander, new species

Female. Black, lightly pollinose. Front polished, face shining, occipital hairs short and sparse; third joint of antennae emarginate below, the style two-fifths as long as the third joint; proboscis twice the head-height, dark fuscous. Six moderately long dorsocentrals, the acrostichals few, moderately long and biseriate, two scutellars. Abdomen shining, the hairs sparse, short and black. Front tibiae and metatarsi coarsely setulose dorsally, all metatarsi two-thirds as long as their tibiae, the hind ones slightly inflated, with incipient scales above toward base and with a long seta at basal third plus a pair of long preapical setae, second joint of hind tarsi with a pair of dorsal setae; hind tibiae with a pair of preapical setae which are twice as long as the diameter of the tibia. Wings with stigma scarcely indicated, veins dark fuscous to root of wing, the first three veins heavy, the fourth and interstitial veins weak, third vein forked much beyond end of second, the branch arising perpendicularly but arcuate, costal ratio of submarginal cells 2:3, anterior crossvein at basal sixth of discal cell, sections of fifth vein equal; halteres black, alulae dark fuscous. Length 3 mm.

Holotype: HAINAN ISLAND, To Han, 7 June 1935 (J. L. Gressitt).

Empis (Coptophlebia) ostentator Melander, new species

Male. Black, very lightly dusted with gray. Occipital hairs very sparse; third joint of antennae excised beneath, three times as long as depth of the bulbous base, the style one-third as long as the third joint. Thoracic bristles rather strong, no hairs on

notum; six dorsocentrals all relatively long, acrostichals very sparse, two scutellars. Pygidium very small, penis thin and fuscous. Legs all black, the whitish pulvilli contrasting, middle tibiae with extensor seta at middle and another preapical, hind tibiae with four extensor setae about twice the diameter of the tibia; metatarsi half the tibial length, the middle ones with long preapical seta, the hind ones with close plantar setulae and with two extensor setae, joints two, three and four of hind tarsi each with a long dorsal seta. Wings hyaline, veins light fuscous, the posterior veins thin and pale, no stigma, third vein forked beyond end of second, the branch straight and nearly perpendicular, costal ratio of submarginal cells 1:3, anterior crossvein at basal fifth of discal cell, sections of fifth vein subequal; halteres black. Length 2 mm.

Holotype: TSIN LEONG SAN, E. Kwantung, S. CHINA, 5 June 1936 (J. L. Gressitt).

A female from the same locality taken on June 2 probably is to be associated with this remarkable male. It is strikingly dimorphic in having pennate legs as indicated in the key, and has reduced setae on the legs. The stigma is faint.

Empis (Coptophlebia) poecilosoma Melander, new species

Female. Occiput brownish, hairs very sparse; antennae black, third joint lanceolate, the style half as long as the third joint; proboscis two and one-half times the head-height, the apical half and palpi yellowish. The black spots of the thorax consist of a round spot just above base of wings, a vertically elliptical spot surrounding the spiracle below the humerus and a small round spot surrounding the posterior spiracle; dorsocentrals and acrostichals sparse, a small lateral bristle on scutellum in addition to the regular apical pair, 1 hum, 1 phum, 1 npl, 5 metapleural hairs. Abdomen brownish, the base and venter pale yellow, hairs very short and sparse, those of first segment black, of rest of abdomen pale. Legs with no long setae or scales, hind legs rather setulose; coxae yellow, trochanters with brown spot, femora, and tibiae except brownish apex, testaceous, tarsi mostly brown, the front metatarsi and basal two-thirds of middle metatarsi paler. Wings lightly infumated in front, veins brown, no stigma, the anal lobe not developed, no axillar notch, basal cells coextensive, third vein forked opposite end of second vein, the branch nearly straight, forming angle of 80 degrees, two-thirds as long as last section of third vein, the costal ratio of submarginal cells 1:5, last section of fourth vein curving forward before disappearing, anterior crossvein at basal third of discal cell, sections of fifth vein proportioned 2:3; halteres black, the stalk and the alulae pale yellow. Length 3 mm.

Holotype: YIM NA SAN, E. Kwantung, S. CHINA, 11 June 1936 (J. L. Gressitt).

***Empis (Coptophlebia) sinensis* Melander, new species**

Related to *tenuinervis* Bezzi and *hyalea* but differs from the description of the latter as follows: Pygidial valves very small, the lower pair not vertical nor hairy, base of penis hidden. Legs uniformly black, bristles reduced in number and length; hind femora with only normal hairs and no setae; front tibiae with two extensor setulae, middle tibiae with apical seta, hind tibiae evenly and slightly thickened and with coarse flexor setulae and five moderate extensor setae; tarsal setae normal, anterior metatarsi slender, middle metatarsi longer than next joint, hind metatarsi half as long as the tibia but not thicker than it, the second and third joints swollen. Costal ratio of submarginal cells 1:2.

Holotype and *allotype*: TSIN LEONG SAN, E. Kwantung, S. CHINA, 5 June 1936 (J. L. Gressitt). *Paratypes*: one male, YIM NA SAN, E. Kwantung, CHINA, 10 June, and one female taken with the types.

***Empis (Coptophlebia) thiasotes* Melander, new species**

Male. Third antennal joint emarginate beneath, two and one-half times as long as basal depth, the style half as long as the joint. Thorax lightly cinereous, its bristles rather short, only three pairs of acrostichals, two scutellars. Abdomen shining, nearly bare, the hairs black; pygidium with upper valves small and spoon-shaped, the lower valves pointed behind, penis thin. Legs fuscous, the knees narrowly paler, pulvilli large and yellowish; anterior femora with only minute hairs and no setae, hind femora with loose flexor fringe of fine hairs and three short setae near middle of exterior face; front tibiae short-setulose within on distal half and externally with a row of fine short setae, middle tibiae with fine hairs and three setae, one within at basal third and two extensor at one-third and two-thirds the length, hind tibiae with a flexor row of close setae which are two or more times as long as the diameter of the joint, and a more open extensor row three bristles of which are much longer than the others; joints of front and hind tarsi tumid and furnished with very long dorsal setae, middle metatarsi half as long as tibia, hind metatarsi two-thirds as long as tibiae. Wings lightly infumated, veins fuscous to base, stigma scarcely darker, third vein forked beyond end of second vein, the branch nearly straight, at angle of 80 degrees, costal ratio of submarginal cells 1:3, anterior crossvein at basal sixth of discal cell, sections of fifth vein equal; halteres black, alulae fuscous. Length 3 mm.

Holotype: Tjibodas, MT. GEDE, 9,000 feet, JAVA (Bryant and Palmer collectors; U. S. National Museum).

Judged by its elongated front metatarsi this species is evidently related to *Empis jacobsoni* Meijere, also from Java, but differs in the bristles of the legs. Meijere describes the legs of his species as being shining black, their pubescence thick, especially on under side of the middle femora where the hairs become long and bristle-like, and the front femora having four to six setae beneath near the base. The species name, *thiasotes*, is Greek, meaning one of a company of dancers.

A FORTUITOUS BEER TRAP

While collecting in the barren-ground country of northwestern Nevada during October of 1941, I stopped at Fish Spring (Washoe County), where a tiny stream originates near a rocky outcrop and disappears into the ground a couple of rods away. The nearest water is better than 20 miles distant. Here an empty beer bottle was found with more than a hundred specimens of *Nicrophorus marginatus*, *Silpha lapponica* (Silphidae), *Saprinus lugens* and *S. discoidalis* (Histeridae), nearly half of which were acceptable cabinet specimens. They had obviously drowned in whatever fluid the bottle last contained, whether beer or rainwater, but in any case, the stale odor, long known to be popular with beetles of these groups, had attracted them in larger numbers than it would have been possible to collect within a radius of five miles from chance animal carcasses.—IRA LA RIVERS.

A CORRECTION TO THE KEY TO THE GENERA OF THE SCRAPTIINI

The last division of the key to the genera of the Scaptiini in the Pan-Pac. Ent., Vol. XXII, No. 2, page 67, April 1946 should be changed to read as follows:

- CC. Last segment of labial palpi oblong-oval, third and fourth antennal segments subequal, second and third segments combined longer than the fourth.....
*Neoscapitia* Fend.

KENNETH M. FENDER.



Melander, A. L. 1946. "Synopsis of Coptophlebia, with descriptions of new American and Oriental species (Diptera, Empididae)." *The Pan-Pacific entomologist* 22, 105-117.

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