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NEW PHILIPPINE GALL MIDGES, WITH A KEY TO THE ITONIDIDÆ

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ONE PLATE

Comparatively little appears to have been done on the gall midges of the Philippine Islands, although several papers, in recent years, have discussed the insect galls of that general region, mostly without descriptions of the adults. It is probable that some of the deformities characterized earlier without the bestowal of scientific names are the work of species described below. There is a large and interesting gall-midge fauna in the Philippines, and this contribution is to be considered as only an introduction to work that should be prosecuted systematically and upon a much more extended scale, if there is to be an adequate understanding of this large group of minute forms.

The richness and diversity of the Philippine fauna is suggested by the fact that in the State of New York practically six hundred species, belonging to seventy-five genera, have been already recognized and the ground has been, by no means, thoroughly covered. Of the Itonididæ there are now known approximately three hundred genera and nearly three thousand species with much yet to be learned concerning the faunæ of subtropical and tropical regions.

The student will find J. J. Kieffer's work¹ one of the most comprehensive for the study of this group as a whole, and the references given in that volume serve as a ready index to a voluminous and widely scattered literature.

¹ *Diptera: Family Cecidomyidæ. Genera Insectorum, Fascicle 152 (1913).*

The present paper describes a number of species collected by Mr. Leopoldo B. Uichanco and transmitted for study by Prof. Charles S. Banks, College of Agriculture, University of the Philippines. The collection contained but fourteen species, all new. Five of these are referable to new genera, which are remarkable because of peculiar structures or notable specialization, such, for example, as *Kronodiplosis*, a member of the bifili easily recognized by the uniarticulate palpi; and *Kamptodiplosis* and *Heliodiplosis*, two genera allied to the peculiar subtropical *Kalodiplosis* Felt, though easily distinguished by the fewer and relatively longer circumfila,² the greater prolongation of the flagellate antennal segments of the male, and the shorter palpi.

Genus **LUZONOMYIA** novum

This genus is erected for a small midge presenting close affinities with *Oligotrophus* Latr., from which it is most easily separated by the distinctly produced basal clasp segment of the male and the small subapical terminal clasp segment.

Type of the genus, *Luzonomyia symphoremæ* sp. nov.

Luzonomyia symphoremæ sp. nov.

Male.—Length, 1.5 millimeters. Antennæ nearly as long as the body, dark brown, sparsely haired; 14 segments, first segment broadly obconic, second subglobose, third and fourth weakly fused, fifth with a stem one-fourth the length of cylindrical basal portion, which has a length about three times its diameter, a rather thick basal whorl of moderately long, stout setæ, a scattering subapical band of longer, slenderer setæ, and low circumfila at basal third and apicad; terminal segment missing. First segment of palpi short, irregular; second moderately broad, with a length about twice its diameter; third a little shorter than second, irregularly pyriform. Mesonotum dark yellowish brown, the fuscous yellowish submedian lines sparsely haired. Scutellum and postscutellum yellowish. Abdomen thickly haired, dark yellowish brown. Wings hyaline. Costa dark brown, subcosta uniting with margin at basal third, the third vein at apex, fifth at distal fourth, its branch at basal third. Halteres nearly uniform fuscous yellowish. Coxæ a variable dark brown. Legs mostly dark brown. Claws moderately long, slender, rather strongly curved apicad, simple, pulvilli a little shorter than claws. Genitalia: Basal clasp segment moderately long, stout, considerably swollen near distal third, at which point the terminal clasp

² Equivalent to Kieffer's "verticilli arcuati."—C. S. B.

segment is attached, the distal lobe being broad, broadly rounded and thickly setose, terminal clasp segment subapical, short, stout, somewhat curved, strongly chitinized and unidentate apicad; dorsal plate moderately long, broad, deeply and triangularly emarginate, the lobes rather thickly and irregularly rounded and margined with rather sparse, stout setæ; ventral plate moderately long, broad, deeply and narrowly incised, the lobes rather broadly rounded and sparsely margined with coarse setæ. Style moderately long, stout and broadly rounded apicad.

Female.—Length, 2 millimeters. Antennæ a little shorter than the body, reddish brown, sparsely long-haired; 14 segments, the fifth with a stem one-fourth the length of cylindrical basal enlargement, which has a length about three and a half times its diameter, a sparse basal whorl of rather stout setæ, a broad subapical band of longer, slenderer setæ, and low circumfila at basal fourth and apicad. Segments progressively somewhat shorter, twelfth with a length a little over twice its diameter, thirteenth with a length one and a half times its diameter, and fourteenth with a length a little greater than its diameter. First segment of palpi subquadrate, second rather broad with a length about two and a half times its diameter, third as long as the second and slightly dilated. Mesonotum dark yellowish brown, the yellowish submedian lines sparsely haired. Scutellum and postscutellum brownish yellow. Abdomen reddish brown, rather thickly haired; terminal segment somewhat darker. Ovipositor short, moderately stout, yellowish basad, and with a length about one-fourth the abdomen. The terminal lobes irregularly triangular and sparsely and coarsely setose. Halteres yellowish white, fuscous subapicad. Coxæ mostly pale yellowish. Legs dark brown. Other structures practically as in male.

Type.—Cecid. a2850, New York State collection; paratype, No. 18315, in College of Agriculture, Los Baños, P. I.

LUZON, Laguna Province, Los Baños and Mount Maquiling, 1917, College of Agriculture accession No. 18315 (*L. B. Uichanco*). A large series of this remarkable form was reared from leaf galls on *Symphorema luzonicum* F. Vill.

Genus *DICEROMYIA* novum

Allied to, though easily separated from, *Zalepidota* Rübsaamen by the greatly produced tapering spurs or horns at distal angles of terminal clasp segment. The subcostal cell is not remarkably broad. The female is unknown, but the characters of the male abundantly justify the above association.

Type of the genus, *Diceromyia vernoniæ* sp. nov.

Diceromyia vernoniæ sp. nov.

Male.—Length, 1.5 millimeters. Antennæ nearly as long as the body, dark brown, almost naked; 14 segments, first segment obconical; second short, the length a little greater than its diameter; the other segments cylindric, sessile; fifth with a length three and a half times its diameter; terminal segment somewhat produced, tapering slightly and with a length about four times its diameter. Each of the flagellate segments is rather thickly clothed with short, curved flattened hairs and has unusually heavy, strongly convoluted circumfila, somewhat suggesting the structure in *Schizomyia* Kieff. though lower and relatively thicker. Palpi much reduced, apparently composed of one short, broadly oval segment bearing a few stout setæ apicad. Mesonotum shining dark brown, the submedian lines sparsely haired, the median area lighter. Scutellum reddish brown. Postscutellum a little darker. Abdomen yellowish brown. Wings moderately broad, hyaline, subcosta uniting with margin near basal third, the third vein nearly straight and extending to apex of wing, fifth vein uniting with posterior margin at distal fourth, its branch near basal half. Halteres yellowish, transparent basad, reddish apicad. Legs a variable reddish brown. Claws moderately stout, strongly curved, simple; pulvilli nearly as long as claws. Genitalia small, basal clasp segment moderately long, stout, narrowly oval; terminal clasp segment with a length more than twice its diameter, the distal angles being produced as strongly chitinized tapering spines or horns, with a length nearly equal to diameter of segment; dorsal plate apparently divided, lobes divergent, narrowly oval, and sparsely setose; ventral plate deeply and triangularly emarginate, the lobes tapering to a narrowly rounded, setose apex. Style moderately long, narrow and tapering to a narrowly rounded apex.

Type.—Cecid. a2842, New York State collection.

LUZON, Laguna, Mount Maquiling, 1917, College of Agriculture accession No. 18143 (*Uichanco*), three males reared from leaf galls on *Vernonia lancifolia* Merr. No description of the gall was given, and the female is unknown.

Asphondylia vitea sp. nov.

Male.—Length, 2 millimeters. Antennæ as long as the body, light brown, thickly short-haired; 14 segments, the fifth with a length about three and a half times its diameter, the others successively longer, thirteenth having a length fully six times its diameter and fourteenth being still longer and slenderer.

Circumfila moderately stout. First segment of palpi short, subquadrate, second with a length nearly three times its diameter, third one-half longer than second. Mesonotum reddish brown, anterior lateral margins narrowly yellowish, sparsely haired. Scutellum and postscutellum yellowish. Abdomen reddish brown, rather thickly yellow-haired. Wings hyaline. Halteres reddish brown. Coxæ, femora, and tibiæ mostly yellowish brown; tarsi lighter. Claws moderately stout, pulvilli nearly as long as claws. Genitalia: Basal clasp segment very short, stout, subglobose; terminal clasp segment short, narrowly oval, heavily chitinized apicad and bidentate; dorsal plate divided, the lobes broadly oval, setose; ventral plate short, triangular, roundly emarginate distad.

Female.—Length, 3 millimeters. Antennæ as long as the body, light brown; 14 segments, fifth with a length about four times its diameter, thirteenth with a length about two and a half times its diameter, fourteenth with a length about three-fourths its diameter. First segment of palpi short, oval; second greatly produced, with a length more than six times its diameter and narrowly fusiform. Mesonotum dark brown, the submedian lines sparsely haired, the lateral angles narrowly yellowish. Scutellum and postscutellum yellowish brown. Abdomen dark reddish brown, rather thickly haired. Halteres yellowish brown. Coxæ dark brown. Legs a variable dark brown. Claws moderately heavy, strongly curved; pulvilli nearly as long as claws. Ovipositor when extended with a length about equal to the abdomen, the dorsal pouch moderately large and thickly clothed with short stout hairs.

Type.—Cecid. a2839, New York State collection; cotypes, male and female, Bureau of Science entomological collection No. 3252 (slide mounts) and No. 14267.

LUZON, Manila, 1905, Bureau of Science accession No. 3232 (*C. S. Banks*); Manila, 1907, Bureau of Science accession No. 6650 (*W. Schultze*), reared from stem galls on *Cissus trifolia* (L.) K. Sch.; Manila, 1910, Bureau of Science accession No. 14267 (*E. D. Merrill*). There was no description of the gall. This species is peculiar in the marked production of the distal antennal segments.

Asphondylia callicarpæ sp. nov.

Male.—Length, 1.5 millimeters. Antennæ nearly as long as the body, dark brown; 14 segments, fifth with a length about four and a half times its diameter, distal segment with a length about three times its diameter, each flagellate segment with

numerous short scalelike hairs and moderately stout circumfila. First segment of palpi short, quadrate; second with a length about three times its diameter, moderately stout; third a little longer and more slender. Mesonotum dark reddish brown, the submedian lines sparsely haired. Scutellum and postscutellum reddish brown. Abdomen dark reddish brown, sparsely haired. Wings hyaline. Halteres whitish basad, fuscous apicad. Anterior coxæ dark brown, mid and posterior coxæ reddish brown. Femora and tibiæ mostly pale straw, tarsi reddish brown. Claws moderately long, strongly curved, pulvilli a little shorter than claws. Genitalia: Basal clasp segment very stout, short, broadly rounded; terminal clasp segment very short, almost subglobose, strongly chitinized and bidentate apicad; other structures obscured in the preparation.

Female.—Length, 2 millimeters. Antennæ nearly as long as body, reddish brown; 14 segments, length of fifth segment nearly four times its diameter, thirteenth segment with a length a little over twice its diameter, fourteenth with a length about three-fourths its diameter. First segment of palpi probably subquadrate, second greatly produced with a length about five times its diameter and somewhat fusiform apicad. Mesonotum slaty brown, the submedian lines sparsely haired. Scutellum reddish brown. Postscutellum yellowish brown. Abdomen dark brown, basal portion of ovipositor yellowish orange. Halteres yellowish basad, fuscous apicad. Coxæ dark brown, femora and tibiæ basad mostly yellowish brown, distal portion of tibiæ and tarsi dark brown. Ovipositor, when extended, about as long as body, the dorsal pouch well developed.

Exuviae with thoracic horns stout and heavily chitinized, and with a rounded antennal margin finely and irregularly dentate. (Described from a fragment.)

Type.—Cecid. a2843, New York State collection; paratypes, male and female, No. 18147, College of Agriculture.

LUZON, Laguna, Mount Maquiling, 1917, College of Agriculture accession No. 18147 (*Uichanco*), reared from leaf galls from *Callicarpa erioclona* Schauer. There was no description of the gall.

Schizomyia acalyphæ sp. nov.

Female.—Length, 1.5 millimeters. Antennæ about one-half the length of the body, dark brown, rather thickly short-haired, basal segments yellowish; 14 subsessile segments; fifth segment with a very short stem; basal portion of second with a length over three times its diameter, thickly clothed with rather

long, dark, scalelike hairs and with a low heavy circumfilum at the basal third and apicad; twelfth segment with a length about twice its diameter; thirteenth with a length less than one-half greater than its diameter; fourteenth with a length a very little greater than its diameter. First segment of palpi short, irregular; second stouter with a length about twice its width; third one-half longer, slenderer; fourth a little longer and more dilated than third. Mesonotum yellowish brown. Scutellum and post-scutellum pale yellowish. Abdomen dark brown, rather thickly clothed with yellowish hairs. Ovipositor when extended nearly as long as body, basal portion yellowish brown, distal part moderately stout, slightly chitinized apicad and with distinct, triangular, sparsely setose lobes. Wings hyaline, third vein uniting with costa just beyond apex, fifth at distal fourth, its branch at basal third. Halteres yellowish, transparent. Coxæ pale yellowish. Femora mostly yellowish or yellowish brown. Tibiæ and tarsi dark brown. Claws moderately long, slender, evenly curved; pulvilli a little shorter than claws.

Type.—Cecid. a2848, New York State collection; part of type material, No. 18313, College of Agriculture, Los Baños, one pinned specimen and one microscopical slide.

LUZON, Laguna, Los Baños, 1917, College of Agriculture accession No. 18313 (*Uichanco*), reared from leaf galls on *Acalypha stipulacea* Klotz. The adults are quite different from those of *S. diplodisci* Felt in the shorter antennæ and decidedly less chitinized condition of the terminal portion of the ovipositor of the female.

Schizomyia diplodisci sp. nov.

Male.—Length, 2 millimeters. Antennæ a little shorter than body, dark brown, thickly short-haired; 14 segments, fifth sub-sessile, the stem about one-ninth the length of the subcylindric, slightly constricted segment, which has a length over three times its diameter. Circumfila stout, moderately low, the scalelike hairs half the length of the segment, rather thick and unusually stout. Terminal segment slightly produced, basal portion with a length about three and one-half times its diameter and with an irregular globose knob apicad. First segment of palpi irregularly ovate; second with a length three times its width, rather stout; third one-half longer, slenderer; fourth fully one-half longer than third, slenderer. Color as in the female. Genitalia: Basal clasp segment moderately long, stout, the distal portion produced as a narrowly rounded, thickly setose process; terminal clasp segment subapical, short, stout, recurved and

somewhat chitinous apicad; dorsal plate short, broad, deeply and roundly emarginate, the broad lobes broadly rounded; ventral plate a little longer, broad, broadly and roundly emarginate. Style slender, acute apicad.

Female.—Length, 2 millimeters. Antennæ nearly as long as the body, reddish brown, whitish basad, thickly haired; 14 segments, fifth subsessile, the stem about one-ninth the length of basal enlargement, the latter with a length fully four times its diameter and rather thickly clothed with dark, broad, scalelike hairs, each with a length about half that of the segment. First segment of palpi irregular; second with a length nearly four times its diameter; third a little longer, broader; fourth one-half longer than third, slenderer. Face yellowish. Eyes black. Mesonotum yellowish red, median area more yellowish, submedian lines rather sparsely clothed with fine setæ. There are also lines of long, stout setæ on the anterolateral margins. Scutellum pale yellowish, with a few stout, dark setæ. Postscutellum yellowish. Abdomen a yellowish red, rather thickly clothed with short, stout setæ. Ovipositor when extended nearly as long as body, basal portion yellowish, distal part aciculate as in *Asphondylia*. Wings slightly fuscous, due to the rather thick covering of dark scales. Halteres yellowish basad, reddish yellow apicad. Coxæ mostly yellowish. Femora reddish brown. Tibiæ reddish basad, dark brown distad, the tarsi almost black.

Type.—Cecid. a2849, New York State collection; paratypes, male and female, No. 18314, College of Agriculture, Los Baños.

LUZON, Laguna, Mount Maquilang, August 29 and September 3 and 6, 1917, College of Agriculture accession No. 18314 (*Uichanco*), reared from terminal stem galls on lateral branches of *Diplodiscus paniculatus* Turcz.

Lasioptera manilensis sp. nov.

Female.—Length, 1.75 millimeters. Antennæ extending to base of abdomen, dark brown with a reddish cast, yellowish basad; 23 segments, fifth with a length nearly equal to its diameter, terminal segment subglobose or ovate. First segment of palpi subquadrate; second a little longer, broad; third more than twice the length of second, slender; fourth a little longer, slenderer than third. Face yellowish. Eyes black. Mesonotum golden brown, submedian lines and lateral areas rather thickly clothed with golden scales. Scutellum pale golden yellow. Postscutellum pale yellowish. Abdomen a rich, reddish brown, basal segment golden yellow, second to seventh segments

margined caudad with golden yellow scales, terminal segment yellowish. Wings slightly fuscous. Costa dark brown with anterior margin thickly clothed with golden scales, subcosta uniting with margin near basal third, third vein at distal third. Halteres, coxæ, femora, and tibiæ golden yellow; tarsi mostly dark brown; claws moderately stout, strongly bidentate, pulvilli as long as claws. Ovipositor when extended about one-third the length of abdomen, moderately stout; basad there is an oval patch of short, stout, thickly set chitinous spines; and the rather broad terminal lobes are ornamented dorsad with a series of moderately heavy, recurved, chitinous processes and laterad and basad with scattering and short, stout chitinous spines.

Type.—Cecid. a2851, New York State collection; paratypes, male and female, No. 18318, College of Agriculture, Los Baños, one microscopical mount labeled: "Type" No. 18318.

LUZON, Laguna, Los Baños and Mount Maquiling, 1917, College of Agriculture accession No. 18318 (*Uichanco*), reared from leaf galls on *Leea manillensis* Walp.

Genus **KRONODIPLOSI** novum

This peculiar genus is easily distinguished from all other bifili by the unidentate claws and the uniarticulate palpi. Other distinguishing characters are given in the detailed description of the species.

Type of the genus, *Kronodiplosis uichancoi* sp. nov.

Kronodiplosis uichancoi sp. nov.

Male.—Length, 1.25 millimeters. Antennæ probably one-half longer than body, yellowish bronze, thickly haired; probably 14 segments, third and fourth apparently fused, fifth with stems one and a half and one-half their diameters, respectively, the basal stem being little more than a deep constriction of what otherwise would have been a cylindrical basal enlargement, each swelling with a moderately thick whorl of long, stout setæ and a circumfilum, the loops on basal enlargement extending nearly to middle of distal enlargement and those on the latter almost to apex of segment. Terminal segments missing. Palpi composed of one broadly fusiform, sparsely haired segment. Eyes large, black, confluent. Mesonotum nearly smooth and variable yellowish brown. Scutellum and postscutellum yellowish brown. Abdomen a little darker, thickly haired. Genitalia lighter. Wings hyaline, subcosta uniting with costa at basal third; third vein just beyond apex, fifth at distal fourth, its branch at basal third. Halteres yellowish, transparent. Coxæ yellowish. Legs

mostly pale straw. Claws on at least the anterior two pairs of legs moderately long, strongly bidentate, pulvilli as long as claws. Genitalia: Basal clasp moderately long, stout; terminal clasp segment moderately chitinized apicad; dorsal plate long, broad, deeply and roundly emarginate, the lobes somewhat divergent, broadly rounded and sparsely setose apicad; ventral plate long, broad, broadly and slightly emarginate; harpes indistinct; style long, slender, narrowly rounded apicad.

Type.—Cecid. a2847, New York State collection, paratype, male, No. 18307, College of Agriculture, Los Baños.

LUZON, Laguna, Los Baños, 1917, College of Agriculture accession No. 18307 (*Uichanco*), reared from leaf galls on *Barringtonia luzonensis* Rolfe.

Genus *KAMPTODIPLOSIS* novum

This genus is allied to the subtropical *Kalodiplosis* Felt, from which it is most easily separated by the more produced flagellate antennal segments of the male, the longer circumfila with fewer and slenderer loops, the greatly reduced palpi, and the very short dorsal and ventral plates.

Type of the genus, *Kamptodiplosis reducta* sp. nov.

Kamptodiplosis reducta sp. nov.

Male.—Length, 1.75 millimeters. Antennæ one-half longer than body, bronzy yellow, thickly haired; ? 14 segments; first segment somewhat produced, subcylindric, with a length about one-half greater than its diameter; second hemispheric; third and fourth free; the stems of fifth each with a length about two and one-half times its diameter, the basal enlargement subglobose, with a subbasal whorl of long stout setæ and a subapical circumfilum, the loops moderately long, stout and not excessively numerous, distal enlargement subcylindric, with a length one-half greater than its diameter, slightly constricted near basal third, basad with a circumfilum, the loops moderately long, near the middle a whorl of long stout setæ and apicad a circumfilum, the loops a little longer and extending nearly to apex of segment; terminal segment missing. Palpi short; first segment irregularly quadrate; second a little longer, broadly oval; third as long as second, broadly oval. Mesonotum reddish brown, the submedian lines yellowish. Scutellum and postscutellum pale yellowish. Abdomen yellowish brown, rather thickly haired. Genitalia yellowish fuscous. Wings hyaline. Costa pale straw, subcosta uniting with margin near basal third, third vein well

beyond apex, fifth indistinct distad, joining posterior margin at distal third, its branch near basal third. Halteres pale yellowish. Coxæ yellowish brown. Legs pale straw. Claws moderately long, strongly curved, unidentate. Pulvilli as long as claws. Genitalia: Basal clasp segment rather long, stout; terminal clasp segment nearly as long, moderately stout and distinctly curved at distal fourth; dorsal plate short, broad, deeply and triangularly emarginate, the lobes somewhat divergent, obliquely truncate distad and sparsely setose; ventral plate short, broad, broadly and roundly emarginate, the lobes obtuse, each with a stout seta, style greatly produced and tapering to a narrowly rounded apex.

Female.—Length, 1.5 millimeters. Antennæ nearly as long as body, brownish yellow, thickly haired; ? 14 segments, fifth with a stem three-fourths the length of the cylindric basal enlargement, which has a length two and one-half times its diameter, a moderately thick subbasal whorl of long stout setæ, a subapical band of long, slenderer setæ and low circumfila, apparently anastomosing and extending from basal fourth to apex of enlargement. First segment of palpi short, irregular; second with a length nearly three times its width; third about two-thirds the length of second, somewhat expanded. Mesonotum a variable yellowish. Scutellum and postscutellum pale yellowish. Abdomen reddish, sparsely haired. Halteres, coxæ, and femora yellowish transparent. Tibiæ and tarsi pale straw. Ovipositor short, terminal lobes narrowly oval, tapering, subacute apicad and thickly clothed with coarse setæ.

Type.—Cecid. a2852, New York State collection.

LUZON, Laguna, Balong Bulo Hill, near Los Baños, 1917, College of Agriculture accession No. 18319 (*Uichanco*), reared from leaf galls on *Siphonodon celastrineus* Griff.

Genus **HELIODIPLOSIS** novum

The unidentate claws and the short triarticulate palpi show an affinity with *Kamptodiplosis*, from which this genus is easily separated by the structure of the ovipositor.

Type of the genus, *Heliodiplosis spatholobi* sp. nov.

Heliodiplosis spatholobi sp. nov.

Female.—Length, 1 millimeter. Antennæ nearly as long as body, sparsely haired; 13 segments, fifth with a stem one-third the length of cylindric basal enlargement, which has a length twice its diameter, a subbasal whorl of moderately stout setæ,

a subapical band of slenderer setæ and subbasal and apical, heavy circumfila, the loops of the former moderately short, those of the latter produced and extending almost to apex of segment. Terminal segment slightly reduced, with a length over twice its diameter and a knoblike apex. Palpi triarticulate, first segment subglobose, second broadly quadrate, third produced, tapering, with a length about four times its diameter. Eyes large, black. Mesonotum dark reddish brown, submedian lines fuscous yellowish. Scutellum and postscutellum reddish yellow. Abdomen dark reddish brown. Ovipositor fuscous. Wings hyaline. Costa dark brown, subcosta uniting therewith at basal third, third vein nearly straight and joining margin well beyond apex; fifth vein simple, subobsolete distad, uniting with posterior margin at distal third, its branch at basal half. Halteres yellowish basad, fuscous apicad. Coxæ dark brown; femora, tibiæ, and basal tarsal segments mostly dark brown; three distal tarsal segments yellowish red. Posterior legs a little darker than anterior and midlegs. Claws moderately stout, strongly curved, unidentate; pulvilli a little shorter than claws. Ovipositor when produced about one-third the length of abdomen; basal portion long, stout, somewhat chitinized, tapering; terminal lobes slender, with a length about five times the width and apicad with a few long setæ.

Type.—Cecid. a2853, New York State collection.

LUZON, Laguna, Mount Maquiling, 1917, College of Agriculture accession No. 18341 (*Uichanco*), reared from leaf galls on *Spatholobus gyrocarpus* (Wall.) Benth.

Profeltiella orientalis sp. nov.

Male.—Length, 1.5 millimeters. Antennæ probably a little longer than the body, bronzy yellow, thickly haired; ? 14 segments, third and fourth free, fifth with stems each two and one-half times its diameter. Basal enlargement subglobose, with a subbasal whorl of long stout setæ and a subapical circumfilum, loops of latter extending almost to the subcylindric distal enlargement, which has a length about one-fourth greater than its diameter, a subbasal circumfilum, with loops reaching nearly to tip of the enlargement, a subapical whorl of long stout setæ and an apical circumfilum, the loops of the latter extending almost to apex of segment. Terminal segment wanting. First segment of palpi irregular, subquadrate; second with a length nearly three times its diameter; third a little longer, moderately stout; fourth narrowly oval and a little shorter than third.

Mesonotum yellowish brown, scutellum and postscutellum yellowish, transparent. Abdomen pale yellowish, sparsely haired. Wings hyaline, long, narrow, with a length two and one-half times the width; subcosta uniting with costa near basal fourth; third vein curved distad, joining margin well beyond apex; fifth vein uniting with posterior margin at distal fourth, its branch near basal half. Halteres yellowish, transparent. Coxæ and femora mostly pale yellowish, tibiæ and tarsi pale straw. Claws wanting. Genitalia: Basal clasp segment moderately long, stout; terminal clasp segment long, stout, tapering, evenly curved; dorsal plate moderately long, broad, deeply and triangularly emarginate, the lobes sparsely setose and tapering to a narrowly rounded apex; ventral plate moderately long, broad, deeply and roundly emarginate, the lobes irregularly truncate and sparsely setose; style long, stout, narrowly rounded apicad.

Type.—Cecid. a2852a, New York State collection.

LUZON, Laguna, Balong Bulo Hill, near Los Baños, 1917, College of Agriculture accession No. 18389 (*Uichanco*). The one male described was reared in association with the unique *Kamp-todiplosis reducta* Felt from leaf galls on *Siphonodon celastri-nus* Griff. The generic reference is tentative. This species, like its German congener *P. ranunculi* Kieff.,¹ is quite possibly a predaceous inhabitant of other galls.

Tricontarinia luzonensis sp. nov.

Male.—Length, 1 millimeter. Antennæ one-half longer than body, light brown, thickly haired; 14 segments, third and fourth segments fused; fourth with stems each with a length twice their diameter, enlargements subglobose, the basal with a sparse whorl of moderately stout setæ and a circumfilum, the loops of the latter extending to base of slightly prolonged distal enlargement, which has subbasal and subapical circumfila, the loops of latter extending to apex of segment and a median whorl of moderately stout setæ. First segment of palpi subquadrate, second with a length about three times its diameter, third about as long as second. Mesonotum shining dark brown. Scutellum and postscutellum reddish brown. Abdomen yellowish brown. Wings hyaline, third vein uniting with margin just before apex, fifth at distal third, its branch near basal half. Halteres whitish. Coxæ yellowish. Femora mostly whitish. Tibiæ and tarsi dark brown. Genitalia: Basal clasp segment moderately long,

¹ Gen. Ins., Fasc. 152 (1913), 195.

rather slender; terminal clasp segment long, slender, slightly curved; dorsal plate moderately long, deeply and triangularly emarginate, the broad lobes divergent and broadly rounded apicad; ventral plate a little shorter, broad, broadly rounded; harpes short, stout, and with a dense fringe of long chitinated spines apicad; style long, slender, truncate.

Female.—Length, 1.5 millimeters. Antennæ nearly as long as body, reddish brown, sparsely haired; 14 segments, fifth with a stem as long as subcylindrical basal enlargement, which has a length one-half greater than its diameter and is strongly constricted near the middle; there is a sparse whorl of long, moderately stout setæ basad and near the middle a circumfilum with moderately high loops and another with loops one-half the length of the stem. Terminal segment somewhat produced, its length about three times its diameter and tapering to a broadly rounded apex. First segment of palpi irregular; second rather long, slender; third one-half longer, dilated. Mesonotum, scutellum, and postscutellum shining dark brown. Abdomen brownish red, fuscous basad. Halteres whitish, transparent. Coxæ yellowish. Femora and tibiæ pale straw, tarsi a little darker. Claws moderately long, slender, strongly curved, pulvilli a little shorter than claws. Ovipositor short, stout, the lobes narrowly oval and sparsely setose, otherwise nearly as in male.

Type.—Cecid. a2844, New York State collection; paratype, No. 18151, College of Agriculture, Los Baños.

LUZON, Laguna, Mount Maquilang, 1917, College of Agriculture accession No. 18151 (*Uichanco*), reared from leaf galls on *Parashorea malaanonan* (Blanco) Merrill. The generic reference is tentative, and from an examination of the insects I am inclined to believe that this species may be predaceous rather than phytophagous.

Hyperdiplosis banksi sp. nov.

Female.—Length, 1.75 millimeters. Antennæ probably nearly as long as body, dark brown, thickly haired; probably 14 segments, fifth with a stem about three-fourths the length of cylindrical basal enlargement, which has a length about twice its diameter, a sparse whorl of stout setæ basad and a similar whorl subapicad. First segment of palpi subquadrate; second long, irregular; third a little longer than second, slenderer; fourth a little longer than third, somewhat dilated. Eyes black. Mesonotum brownish yellow, the submedian lines a little lighter. Scutellum yellowish. Postscutellum reddish brown. Abdomen

a darker reddish brown, sparsely haired. Wings hyaline with a yellowish cast. Costa yellowish brown. Halteres yellowish, transparent. Coxæ reddish yellow. Femora, tibiæ, and basal tarsal segments mostly dark brown, distal tarsal segments lighter. Claws moderately long, strongly curved at nearly right angles, swollen distad, simple; pulvilli a little shorter than claws. Ovipositor short, terminal lobes with a length over four times the width, irregularly rounded apicad and sparsely clothed with long setæ.

Type.—Cecid. a2846, New York State collection.

LUZON, Laguna, Los Baños Falls, near Los Baños, 1917, College of Agriculture accession No. 18306 (*Uichanco*), reared from leaf galls on *Cissus adnata* Wall. var. The insect is somewhat larger than the species heretofore referred to this genus, and it is possible that on discovering the male it may be necessary to place this species elsewhere.

Hyperdiplosis relictæ sp. nov.

Female.—Length, 1.5 millimeters. Antennæ about half the length of body, light brown, thickly haired; ? 14 segments, fifth with a stem three-fourths length of cylindric basal enlargement, which has a length about two and one-half times its diameter. Mouthparts somewhat produced, with a length about one-fourth the vertical diameter of head. First segment of palpi presumably short, irregular; second with a length about three times its diameter; third a little longer, slenderer; fourth as long as third, somewhat dilated. Mesonotum reddish brown. Scutellum and postscutellum a little lighter, rather thickly haired. Abdomen yellowish brown, thickly haired. Wings hyaline, third vein uniting with costa beyond apex of wing, fifth joining posterior margin at distal third, its branch at basal third. Halteres whitish, transparent. Coxæ yellowish brown. Legs mostly fuscous straw. Claws moderately long, slender basad, curved almost at right angles, distal portion distinctly swollen and tapering gradually to an acute, slightly recurved apex. Pulvilli about three-fourths the length of basal portion of claw. Ovipositor short, lobes narrowly oval, tapering slightly distad and rather thickly clothed with long setæ.

Type.—Cecid. a2841, New York State collection; paratype, No. 16015, College of Agriculture, Los Baños.

LUZON, Manila, 1911, Bureau of Science accession No. 16015 (*C. R. Jones*); the food plant is not recorded. The claws, in particular, are quite different from those of *H. banksi* Felt.

* Revised from *Bull. N. Y. State Mus.* (1913), No. 165, 129.

- c*¹. Subcosta and third vein distinctly united as though by a very short cross vein. The fork formed by the two branches of the fourth vein even..... *Microcerata* Felt.
- c*². Subcosta and third vein not fused and with no trace of a cross vein.
- d*¹. Fork of the fourth vein with the two branches even.
Konisomyia Felt.
- d*². Fork of the fourth vein with the branches irregular.
Tritozyga H. Lw.
- b*². Second antennal segment normal.
- c*¹. Flagellate segments not greatly reduced..... *Neptunimyia* Felt.
- c*². Flagellate segments sessile, with a length only a little greater than the diameter..... *Neocatocha* Felt.

CAMPYLOMYZARIÆ

Key to the genera.*

- a*¹. Wingless or, if wings are present, the fifth vein simple.
- b*¹. Claws with long, parallel teeth, the pulvilli very short.
Strobliaella Kieff.
- b*². Claws denticulate, the pulvilli absent..... *Wasmanniella* Kieff.
- b*³. Claws simple..... *Pezomyia* Kieff.
- a*². Winged, fifth vein forked.
- b*¹. Third vein usually well separated from costa and frequently uniting therewith at or beyond the apex.
- c*¹. Flagellate antennal segments globose, stemmed in both sexes and ornamented only with whorls of long hairs.
- d*¹. Fourth vein present.
- e*¹. Palpi tri- or quadriarticulate.
- f*¹. Wings normal, slender, antennal segments, male 14, female 11.
Joannisia Kieff.
- f*². Wings broad, not twice as long as wide, antennal segments, female 12..... *Projoannisia* Kieff.
- e*². Palpi biarticulate, the male with 14 and the female with 13 antennal segments, the claws strongly bent, dilated subapically..... *Peromyia* Kieff.
- d*². Fourth vein wanting.
- e*¹. Antennal segments stemmed..... *Trichopteromyia* Will.
- e*². Antennal segments sessile, the second enlarged, globose; palpi triarticulate..... *Ceratomyia* Felt.
- c*². Flagellate antennal segments with the enlargement transverse and bearing a whorl of stemmed disks..... *Xylopriona* Kieff.
- c*³. Flagellate antennal segments cylindric, subsessile.
- d*¹. Male with 12, female with 9 antennal segments, fourth vein rudimentary, obsolete distad..... *Mycophila* Felt.
- d*². Female with 18 segments, the enlargements of the flagellate segments with a whorl of 4 awl-shaped appendages.
Tetraxyphus Kieff.

* Revised from *Bull. N. Y. State Mus.* (1913), No. 165, 154, 55.

*b*². Third vein rarely extending to the apex of the wing; flagellate antennal segments subsessile in the female, ornamented with crenulate whorls or other structures more complex than irregular whorls of simple hairs.

*c*¹. Palpi triarticulate.

*d*¹. Wings wanting, reduced or normal; antennæ with 14 or 15 segments, the enlargements with stemmed disks.

Pezomyia Kieff.

*c*². Palpi quadriarticulate, as a rule.

*d*¹. Antennæ very short, the male with 10 to 11, the female with 6 to 8 subsessile segments, the second greatly enlarged.

Micromyia Rond.

*d*². Antennæ not very short, the male with 14, the female with 11 to 22 antennal segments, the second not greatly enlarged.

Campylomyza Meign.*

*e*¹. Flagellate antennal segments with a more or less distinct collar subapicad, forming a more or less cup-shaped cavity.

*f*¹. Claws denticulate, the pulvilli well developed.

Prionellus Kieff.

*f*². Claws arched, enlarged slightly subapicad and with transverse striations; the pulvilli about half the length of the claws.....

Prosapirionus Kieff.

*f*³. Claws simple.

*g*¹. Pulvilli short or rudimentary.....

Aprionus Kieff.

*g*². Pulvilli as long as the claws.

*h*¹. Ovipositor large, covered with long hairs, with two divergent lobes and a small lobe basad.

Urosema Kieff.

*h*². Ovipositor not as above, triarticulate.

Cylophora Kieff.

*e*². Flagellate antennal segments with a subapical whorl of stemmed disks.

*f*¹. Claws with a minute subapical tooth.....

Monardia Kieff.

*f*². Claws simple, a little shorter than the pulvilli.

Amblyspatha Kieff.

*e*³. Flagellate antennal segments with reniform processes subapicad, claws bent at right angles, dilated subapicad.

Bryomyia Kieff.

*e*⁴. Flagellate antennal segments with subapical whorls of short, stout, usually recurved spines.....

Cordylomia Felt.

*e*⁵. Flagellate antennal segments with series of whorls of short, stout, curved spines.....

Corinthomyia Felt.

* This genus is insufficiently defined and as here stated is practically of supergeneric value.

HETEROPEZINÆ

*Key to the genera.**

- a*¹. Metatarsus longer than the second segment.
- b*¹. Tarsi quadriarticulate.
- c*¹. Three long veins.
- d*¹. Palpi quadriarticulate (in amber)..... *Meunieria* Kieff.†
- d*². Palpi triarticulate..... *Palæospaniocera* Meun.
- d*³. Palpi biarticulate..... *Miastor* Mein.
- d*⁴. Palpi uniarticulate..... *Peromiastor* Kieff.
- c*². One long vein, wings very narrow..... *Neostenoptera* Meun.
- b*². Tarsi triarticulate, 2 long veins.
- c*¹. Antennal segments cylindric..... *Heteropeza* Winn.‡
- c*². Antennal segments globose (in amber)..... *Monodicrana* H. Lw.†
- a*². Metatarsus shorter than the second segment.
- b*¹. Tarsi quinquarticulate.
- c*¹. Wing membrane finely haired.
- d*¹. Third vein extending to the apex of the wing.
- e*¹. Palpi quadriarticulate.
- f*¹. Fifth vein forked..... *Haplusia* Karsch.
- f*². Fifth vein simple..... *Johnsonomyia* Felt.§
- e*². Palpi triarticulate, wings acuminate..... *Meinertomyia* Felt.
- e*³. Palpi uniarticulate, wings acute apically..... *Leptosyna* Kieff.
- d*². Third vein not extending to the apex of the wing.
- e*¹. Palpi biarticulate..... *Frirenia* Kieff.
- e*². Palpi triarticulate..... *Epimyia* Felt.
- c*². Wing membrane scaled.
- d*¹. Fifth vein forked, palpi quadriarticulate (in amber).
Ledomyiella Meun.
- d*². Fifth vein simple.
- e*¹. Four simple long veins, palpi biarticulate, antennal segments
stemmed in the female..... *Kronomyia* Felt.
- e*². Three simple long veins, palpi triarticulate.
Brachyneura Rond. (*Spaniocera* Winn.).
- b*². Tarsi biarticulate..... *Oligarces* Mein.

* Revised from *Bull. N. Y. State Mus.* (1913), No. 165, 204.

† Location provisional.

‡ Kunstler and Chaine [*Compt. Rend. Soc. Biol.* (1902), 54, 535], give the characters of a form reared from bananas as follows: Tarsi biarticulate, the first segment longer than the second; wings with two or three long veins, the first two branched; palpi quadriarticulate. It was referred to the *Heteropezinæ* though no name was proposed and is presumably related to *Heteropeza* Winn. and *Monodicrana* H. Lw.

§ The Australian *Necrophlebia* Skuse and *Chastomera* Skuse are apparently closely related to this American genus and are provisionally associated therewith.

ITONIDIDINÆ

PORRICONDYLIARIÆ

Key to the genera.*

- a*¹. Cross vein not parallel with costa, forming a well-marked angle therewith.
- b*¹. Four long veins, the fifth simple, the sixth free.
- c*¹. Fifth vein arising from the third near the cross vein, a supernumerary vein at the basal third of subcosta..... *Diallactes* Kieff.
- c*². Fifth vein arising from the base of the wing, no supernumerary vein at the basal third of subcosta.
- d*¹. Fifth vein well developed; circumfila modified to form horseshoe-like appendages on opposite faces of the segment.
(Syn. *Winnertziola* Kieff.)
- d*². Fifth vein rudimentary, obsolete basad and apicad (Australian).
Gonioclema Skuse.†
- b*². Three long veins, the sixth a branch of the fifth or wanting.
- c*¹. Wings not very long and narrow, the cross vein at an oblique angle to costa.
- d*¹. Fifth vein forked, the sixth a branch of the fifth.
- e*¹. Fifth vein close to the posterior margin and uniting therewith near the basal half; palpi triarticulate; terminal clasp segment short..... *Bryocrypta* Kieff.
- e*². Fifth vein not close to the posterior margin, uniting therewith near the distal fourth; palpi quadriarticulate.
- f*¹. No supernumerary vein at base of subcosta; claws toothed; terminal clasp segment greatly produced, slender.
Didactylomyia Felt.
- f*². Supernumerary vein at base of subcosta; claws simple.
Liebliola Kieff. and Jorg.
- d*². Fifth vein simple, the sixth wanting.
- e*¹. Palpi quadriarticulate..... *Johnsonomyia* Felt.‡
- e*². Palpi biarticulate..... *Colomyia* Kieff.
- c*². Wings usually very long, narrow, the cross vein almost at right angles to costa.
- d*¹. Fifth vein forked, the sixth a branch of the fifth; terminal clasp segment short, swollen, the claws usually simple.
Colpodia Winn.
- d*². Fifth vein simple, not reaching the wing margin.
Clinophæna Kieff.
- d*². Fifth vein simple, the sixth wanting (fossil).
Palæocolpodia Meun.
- a*². Cross vein parallel or nearly so with costa and apparently a continuation of the third vein.

* Revised from *Bull. N. Y. State Mus.* (1915), No. 180, 128-30.

† Location provisional.

‡ The absence of circumfila compels the reference of this genus to the *Heteropezinæ*, though the superficial wing and antennal structures would place it here. It has therefore been included in the key simply to facilitate identification.

- b*¹. Four long veins, the fifth simple, the sixth free.
- c*¹. Fifth vein not obsolete basad.
- d*¹. Distal portion of the abdomen not recurved dorsad.
- e*¹. Pulvilli longer than the unidentate claws; 16 or more antennal segments; ovipositor biarticulate..... *Asynapta* H. Lw.
- e*². Pulvilli shorter than the simple claws; 14 antennal segments; ovipositor triarticulate..... *Clinorhytis* Kieff.
- d*². Abdomen slender, the distal portion recurved dorsally; claws toothed, the lobes of the ovipositor biarticulate.
Rübsaamenia Kieff.
- c*². Fifth vein obsolete basally; abdomen greatly produced, at least three times the length of the remainder of the body.
Dicerura Kieff.
- b*². Three long veins, the sixth a branch of the fifth or wanting.
- c*¹. Fifth vein forked.
- d*¹. Circumfila of the male not forming long loops or bows as in the *Itonidinariae*.
- e*¹. Palpi quadriarticulate.
- f*¹. Antennal segments of the male greatly produced, or at least with a distinct stem.
- g*¹. Abdomen not recurved dorsad.
- h*¹. Claws simple.
- i*¹. Pulvilli as long as or a little shorter than the claws.
- j*¹. Flagellate antennal segments of the male globose, elongated and constricted in the middle in the female..... *Porricondyla* Rond.
- j*². Flagellate antennal segments elongated and subcylindrical in the two sexes..... *Phænepidosis* Kieff.
- i*². Pulvilli rudimentary.
- j*¹. Flagellate antennal segments of the female with a stem one-half to three-fourths the length of the enlargement; lobes of ovipositor biarticulate.
Parepidosis Kieff.
- j*². Flagellate antennal segments of the female sessile; lobes of the ovipositor very small.
Mysocosmus Kieff.
- h*². Claws toothed.
- i*¹. Pulvilli as long as the claws.
- j*¹. Terminal clasp segment as long as the basal clasp segment, capitate apicad..... *Dicroneurus* Kieff.
- j*². Terminal clasp segment ellipsoidal, shorter than the basal clasp segment..... *Synaptella* Kieff.
- i*². Pulvilli reaching at most to the middle of the claws.
- j*¹. Third and fourth antennal segments fused.
Synarthrella Kieff.
- j*². Third and fourth antennal segments not fused; terminal clasp segment a little longer than its diameter, almost truncate, the margin spined.
Prosepidosis Kieff.
- i*³. Pulvilli rudimentary.
- j*¹. Claws strongly curved, almost at right angles, the teeth equally long.... *Tetradiplosis* Kieff. and Jörg.

- g*². Abdomen slender, recurved dorsad..... *Camptomyia* Kieff.
*f*². Antennal segment not greatly produced in both sexes.
*g*¹. Basal clasp segment ovate, denticulate apicad; terminal
 clasp segment wanting..... *Dirhiza* H. Lw.
*g*². Male genitalia presumably normal; flagellate antennal
 segments subsessile or nearly so; lobes of the ovipositor
 normal..... *Prodirhiza* Kieff.
*e*². Palpi triarticulate..... *Lopesiella* Tav.
*d*². Circumfila of the male forming long loops as in the *Itonidiniariæ*.
*e*¹. Palpi quadriarticulate..... *Lopesia* Rübs.
*e*². Palpi uniarticulate..... *Allodiplosis* Kieff. and Jörg.
*c*². Fifth vein simple, the sixth wanting.
*d*¹. Claws denticulate, as long as the pulvilli or at most twice as
 long as the pulvilli..... *Holoneurus* Kieff.
*d*¹. Claws toothed, more than twice the length of the pulvilli.
Coccopsis Meij.

LASIOPTERIARIÆ

Key to the genera.

- a*¹. Third vein very near costa and uniting therewith at or before the basal
 half, very rarely near the distal third.
*b*¹. Mouth parts and thorax normal; that is, not greatly prolonged.
*c*¹. Palpi with three or four segments.
*d*¹. Third and fourth antennal segments coalescent or closely fused;
 pulvilli always well developed.
*e*¹. Three long veins, the fifth forked some distance from its base.
*f*¹. Ventral plate bilobed; palpi usually quadriarticulate.
Lasioptera Meig.*
*f*². Ventral plate straight, not emarginate; palpi triarticulate.
Prolasioptera Kieff.
*e*². Four simple long veins..... *Neolasioptera* Felt.
*d*². Third and fourth antennal segments not coalescent, at least
 separated by a distinct constriction; pulvilli sometimes small
 or rudimentary.
*e*¹. Palpi quadriarticulate; claws simple..... *Protoplonyx* Felt.
*c*². Palpi biarticulate or uniarticulate.
*d*¹. Third and fourth antennal segments coalescent or closely fused;
 pulvilli always well developed.
*e*¹. Palpi uni- or biarticulate, rarely triarticulate... *Asteromyia* Felt.
*d*². Third and fourth antennal segments not coalescent, at least
 separated by a distinct constriction; pulvilli sometimes small or
 rudimentary.
*e*¹. Palpi biarticulate, claws toothed or simple; terminal lobe of
 the ovipositor rounded, dorsally with a chitinous barbed
 process..... *Stefaniella* Kieff.

* Kieffer has proposed the name *Meunieriella* for species of *Lasioptera* without the dorsal group of hooks on the ovipositor. This, if adopted, would mean placing a considerable number of American forms now referred to *Lasioptera* into this new genus.

*e*². Palpi uniarticulate.

*f*¹. Mouth parts produced.

*g*¹. Claws distinctly toothed.

*h*¹. Ovipositor with a group of hooks on the basal half.

Baldratia Kieff.

*h*². Ovipositor without hooks but with produced chitinous pectinate appendages, lobes broad..... Baldratiella Kieff.

*g*². A very small basal tooth on the claws; ovipositor stout, curved, the distal portion slender, almost aciculate.

Baldratiola Kieff.

*f*². Mouth parts not produced, normal; claws simple.

*g*¹. Ovipositor aciculate..... Aplonyx Perez.

*g*². Ovipositor with two diverging lobes..... Dibaldratia Kieff.

*g*³. Ovipositor obliquely truncate distad, with a row of hooks dorsad; head very small, well under the mesonotum.

Stefaniola Kieff.

*b*². Mouth parts and thorax prolonged; antennal segments 10 to 13.

*c*¹. Three long veins, the fifth forked..... Clinorrhyncha Loew.

*c*². Four long veins, the fifth simple..... Ozirhynchus Rond.

*a*². Third vein distinctly separated from costa and uniting therewith beyond the basal half.

*b*¹. First antennal segment normal; not strongly produced; third vein strongly arched, it and the body not thickly clothed with scales.

Camptoneuromyia Felt.

*b*². First antennal segment produced, with a length about three times its diameter, the third vein and the body thickly clothed with shining, frequently silvery, scales; ovipositor aciculate... Trotteria Kieff.

DASYNEURIARIÆ

Key to the genera. *

*a*¹. Palpi quadriarticulate.

*b*¹. Antennæ usually with 14 or more segments.

*c*¹. Third vein uniting with the margin well beyond the apex of the wing.

*d*¹. Fifteen antennal segments; wings hyaline; the ovipositor short.

*e*¹. Claws normal, not strongly bent..... Bæomyza Kieff.

*e*². Claws bent almost at right angles, pulvilli rudimentary.

Stomatosema Kieff.

*d*². Thirteen antennal segments; wings spotted; pulvilli almost half the length of the claws..... Hallomyia Kieff.

*c*². Third vein uniting with costa near or at the apex of the wing.

*d*¹. Costa without scales.

*e*¹. Antennæ with 14 to more than 20 segments, usually with 18 or more.

*f*¹. Third vein slightly curved, 19 antennal segments, the ovipositor short, the lobes orbicular..... Promikiola Kieff.

*f*². Third vein nearly straight, the ovipositor usually produced.

*g*¹. Ovipositor not chitinized apicad.

*h*¹. Claws plainly unidentate, the tooth heavily chitinized.

Rhabdophaga Westw.

*h*². Claws with a slightly chitinized trifid tooth.

Chortomyia Kieff.

- g². Ovipositor chitinized apicad, bladelike, the claws weakly toothed..... *Procystiphora* Felt.
- d². Costa scaled.
- e¹. Antennæ with 16 segments, claws shorter than the pulvilli, the ovipositor long..... *Rivellia* Kieff.
- e². Antennæ with 18 segments, claws longer than the pulvilli.
Trichoperrisia Kieff.
- e³. Antennæ with 21 cylindrical segments, the legs scaled, the claws shorter than the pulvilli..... *Xyloperrisia* Kieff.
- e⁴. Antennæ with 22 ovoid segments in the male, cylindrical in the female, claws shorter than the pulvilli.
Pernettyella Kieff.
- c³. Third vein uniting with costa well before the apex of the wing, straight or curved cephalad and tapering but little.
- d¹. Claws of the anterior legs toothed, those of the mid and posterior legs simple.
- e¹. Costa scaled, antennal segments 14, ovipositor short.
Phænolauthia Kieff.
- d². Claws on all legs toothed.
- e¹. Wing veins distinctly scaled, the membrane more or less fuscous.
- f¹. Body sparsely scaled, 14 cylindrical segments, the circumfila produced irregularly in certain males.... *Lasipteryx* Steph.
- f². Body scaled.
- g¹. Claws of anterior legs, at least, toothed, more than twice the length of the pulvilli; 14 cylindrical antennal segments; ovipositor short..... *Lauthia* Kieff.
- g². Claws of all the legs toothed, pulvilli rudimentary, ovipositor short..... *Cryptolauthia* Kieff.
- e². Wing veins not distinctly scaled, the membrane hyaline.
- f¹. Fifth vein forked, the female ovipositor long, sometimes longer than the body, circumfila not greatly produced.
Dasyneura Rond. (*Microperrisia* Kieff.).
- f². Fifth vein simple, antennæ with 12 segments, the one circumfilum below the middle of the segment; pulvilli very small *Prowinnertzia* Kieff.
- b². Antennæ with 10 to 12 or 13, rarely with 14 segments.
- c¹. Thorax and abdomen plainly covered with scales; antennæ with 10 to 12 segments.
- d¹. All the claws toothed; ovipositor long.
- e¹. Twelve subglobular antennal segments. *Sphærolauthia* Kieff.
- e². Ten to 12 subcylindrical antennal segments; ovipositor greatly produced..... *Ledomia* Kieff.
- d². Claws of the anterior legs toothed, those of the mid and posterior legs simple, fifth vein simple, ovipositor short.
Brachyneurella Kieff.
- c². Thorax and abdomen not plainly covered with scales.
- d¹. Third vein uniting with costa near the apex of the wing.
- e¹. Antennæ with 13 or 14 segments; terminal clasp segment of the male short, swollen; ovipositor subglobose, spined apically.
Cystiphora Kieff.
- e². Antennæ with 13 or 14 segments; claws as long as the pulvilli; terminal clasp segment large..... *Geocrypta* Kieff.

- e*³. Antennæ with 12 segments, the flagellate ones sessile in both sexes.
- f*¹. Terminal clasp segment large, greatly swollen. *Macrolabis* Kieff.
- f*². Terminal clasp segment normal.
- g*¹. Harpes not sickle-shaped or greatly produced. *Arnoldia* Kieff.
- g*². Harpes sickle-shaped, greatly produced.... *Harpomyia* Felt.
- d*². Third vein uniting with costa well before the apex of the wing.
- e*¹. Antennæ with 12 segments.
- f*¹. Third vein strongly curved, uniting with costa at the distal fourth; flagellate antennal segments of the male stemmed. *Neuromyia* Felt.
- a*². Palpi triarticulate.
- b*¹. Claws unidentate; rarely bidentate.
- c*¹. Antennæ with 16 to 18 segments, the flagellate ones stemmed in the male, sessile in the female, claws shorter than the pulvilli; male genitalia not unusual..... *Dryomyia* Kieff.
- c*². Antennæ with 18 segments, the flagellate ones sessile, the claws with a length one-half that of the pulvilli, terminal clasp segment very large..... *Calopedila* Kieff.
- c*³. Antennal segments 15, costa haired, legs scaled, ovipositor long. *Spartiomyia* Kieff.
- c*⁴. Antennæ with 12 segments, terminal clasp segment slender, the dorsal and ventral plates deeply emarginate..... *Rhizomyia* Kieff.
- b*². Claws pectinate.
- c*¹. Antennæ with 14 segments, the terminal clasp segment long, stout, the ovipositor short, the lobes broadly oval. *Ctenodactylomyia* Felt.
- a*³. Palpi biarticulate.
- b*¹. Antennal segments 14 to 18, the flagellate ones usually stemmed in both sexes..... *Diarthronomyia* Felt.
- b*². Antennal segments 12, the flagellate ones in the male stemmed. *Coccidomyia* Felt.
- a*⁴. Palpi uniarticulate.
- b*¹. Antennal segments 20, the flagellate ones stemmed in the male, sessile in the female, circumfila reticulate, the unidentate claws shorter than the pulvilli..... *Scheuria* Kieff.
- b*². Antennal segments 16 in the male, 18 in the female, the flagellate ones in the male stemmed, the trifid claws longer than the pulvilli. *Guarephila* Tav.

OLIGOTROPHIARIÆ

*Key to the genera **

- a*¹. Palpi quadriarticulate.
- b*¹. Third vein uniting with the margin well before the apex.
- c*¹. Antennæ with 10 segments in the male, 9 in the female; claws very slender, curved almost at right angles; pulvilli rudimentary. *Properrisia* Kieff.
- c*². Antennæ with 14 or more segments.

* Revised from Kieffer.

- d*¹. Terminal clasp segment moderately large, pubescent, gradually tapering; ovipositor long, cylindric..... *Janetiella* Kieff.
- d*². Terminal clasp segment large, elongate-ellipsoidal, the dorsal and ventral plates bilobed; ovipositor protractile.
Zygiobia Kieff.
- c*³. Antennæ with 13 segments.
- d*¹. Female having the stems of the flagellate segments with a length two-thirds that of the segment, the terminal clasp segment slender..... *Nanolauthia* Kieff.
- b*². Third vein uniting with the margin at or very near the apex.
- c*¹. Antennæ with 14 segments, the genitalia and ovipositor about as in *Dasyneura*..... *Phytophaga* Rond.
- c*². Antennæ with 16 to 20 segments.
- d*¹. Third and fourth antennal segments not fused.
- e*¹. Antennal segments in the male with a stem about two-thirds the length of the segment; terminal clasp segment rather slender, long, tapering gradually..... *Phegomyia* Kieff.
- e*². Stem of the flagellate antennal segment as long as the basal enlargement, otherwise as in the preceding.
Craneiobia Kieff.
- d*². Third and fourth antennal segments fused; antennæ with 18 or 19 segments, the stem of the flagellate segments with a length one-half to two-thirds that of the segment; terminal clasp segment slightly enlarged, gradually tapering, the dorsal and ventral plates deeply bilobed..... *Phegobia* Kieff.
- c*³. Antennæ with 20 to 24 segments.
- d*¹. Antennal segments of male stemmed, those of female sessile; dorsal and ventral plates emarginate; ovipositor short, lobed.
Mikiola Kieff.
- a*². Palpi triarticulate.
- b*¹. Ovipositor distinctly chitinized.
- c*¹. Ovipositor aciculate or cultriform; antennal segments 12 to 24.
Sackenomyia Felt.
- c*². Ovipositor short, with a rounded, chitinized terminal plate; antennal segments 13..... *Phlyctidobia* Kieff.
- b*². Ovipositor not chitinized.
- c*¹. Terminal clasp segment of male subapical, the basal clasp segment with a broad, apical lobe..... *Luzonomyia* g. nov.
- c*². Terminal clasp segment of male apical.
- d*¹. Ovipositor almost truncate apically, without a distinct pocket; terminal clasp segment not large, the empodium twice as long as the claws, the third and fourth antennal segments not fused.
Oligotrophus Latr.
- c*³. Ovipositor with the terminal segment pocket-shaped, the empodium much longer or only a little longer than the claws.
- d*¹. Intermediate whorl of the flagellate antennal segments in the male with two greatly produced hairs, the third and fourth antennal segments fused; terminal clasp segment very large, elongate, ellipsoidal..... *Mikomyia* Kieff.
- d*². Whorls of the flagellate antennal segments otherwise.
- e*¹. Basal clasp segment with a median, membranous, transparent prolongation attaining the tip of the ventral plate; terminal clasp segment large, pointed, ovoid.

- f*¹. Ventral plate deeply bilobed, third and fourth antennal segments fused in the male, the enlargement of the third a little longer than that of the fourth..... *Semudobia* Kieff.
- f*². Ventral plate entire, third and fourth segments not fused, the enlargement of the third twice as long as that of the fourth..... *Apiomyia* Kieff.
- e*². Basal clasp segment otherwise.
- f*¹. Stems of the flagellate antennal segments short in both sexes.
- g*¹. Antennæ with 22 to 25 segments (palpi are given as bi- or triarticulate); costa, subcosta, and third vein scaled.
Uleia Rübs.
- g*². Antennæ with 17 segments, the flagellate segments with 5 or 6 slightly looped circumfila; wings with a supernumerary vein..... *Lyciomyia* Kieff. and Jörg.
- f*². Stems of the flagellate antennal segments long in the male, very short or wanting in the female.
- g*¹. Third and fourth antennal segments fused; terminal clasp segment not large, gradually constricted, the larva with a breastbone..... *Blastomyia* Kieff.
- g*². Third and fourth antennal segments not fused; terminal clasp segment very large, swollen, the larva without a breastbone..... *Iteomyia* Kieff.
- a*³. Palpi bi- or uniarticulate.
- b*¹. Ovipositor chitinized, cultriform or more or less aciculate.
Sackenomyia Felt.
- b*². Ovipositor not distinctly chitinized.
- c*¹. Pulvilli nearly twice as long as the empodium.
- d*¹. Palpi biarticulate..... *Psectrosema* Kieff.
- d*². Palpi uniarticulate..... *Walshomyia* Felt.
- c*². Pulvilli equal to the empodium; palpi uniarticulate.
Isosandalum Kieff.
- c*³. Pulvilli distinctly shorter than the empodium.
- d*¹. Empodium as long as or longer than the claws.
- e*¹. Third flagellate antennal segment of the male large and with three circumfila, the other segments with two whorls.
Guignonia Kieff.
- e*². Third flagellate antennal segment not large and heavy and having no more circumfila than the others.
- f*¹. Terminal clasp segment large, swollen, or only slightly constricted distad; ovipositor subcylindric, greatly protractile; terminal segment strongly constricted, pocket-shaped.
- g*¹. Flagellate antennal segments with a long stem in both sexes; circumfila reticulate..... *Rhopalomyia* Rübs.
- g*². Flagellate antennal segments sessile or subsessile in the female; circumfila not reticulate.
- d*². Empodium twice as long the claws..... *Arceuthomyia* Kieff.
- d*³. Empodium not longer or only a little longer than the claws; palpi uniarticulate; larva without a breastbone.
Misopatha Kieff.*

* *Panteliola* Kieff., according to Kieffer, is separated from *Misopatha* by the biarticulate palpi.

ASPHONDYLIARIÆ

Key to the genera.*

- a*¹. Ovipositor protractile, aciculate or nearly so, the terminal clasp segment of the male usually uni- or bidentate.
- b*¹. Palpi quadriarticulate.
- c*¹. Flagellate antennal segments with long whorled hairs and two strongly sinuous and anastomosing circumfila, especially in the male.
- d*¹. Ovipositor aciculate, without lamellæ apicad; larval breastbone bidentate..... *Schizomyia* Kieff.
- d*². Ovipositor subaciculate, with two very small lamellæ apicad; larval breastbone unidentate..... *Kiefferia* Mik.
- c*². Flagellate antennal segments with short hairs, not whorled.
- d*¹. Flagellate antennal segments sessile, without an appreciable stem.
- e*¹. Claws much longer than the pulvilli; the basal segment of the ovipositor with rows of minute spinules.
Tetrasphondylia Kieff.
- e*². Claws as long as the pulvilli; the first segment of the ovipositor finely striate, without spinules.
Parasphondylia Kieff.
- d*². Flagellate antennal segments subsessile, with a stem about one-fourth the length of the basal enlargement; claws shorter than the pulvilli..... *Xenasphondylia* Felt.
- b*². Palpi bi- or triarticulate, rarely uniarticulate.
- c*¹. Third vein uniting with the margin near the apex of the wing.
- d*¹. Circumfila in the female consisting of two comparatively simple bands.
- e*¹. Terminal clasp segment of the male uni- or bidentate, not pectinate.
- f*¹. Subcostal cell normal, not opaque, the ovipositor with a lobed pouch proximad, not vesiculate basad.
Asphondylia H. Loew.
(Syn. *Monasphondylia* Kieff.)
- f*². Subcostal cell opaque, the ovipositor with a globose, striate basal enlargement..... *Bruggmanniella* Tav.
- e*². Terminal clasp segment of the male pectinate.
- f*¹. Terminal clasp segment apical; ovipositor subaciculate, with submedian groups of hairs on the distal segment.
Proasphondylia Felt.
- f*². Terminal clasp segment of the male subapical, the ovipositor probably as in *Schizomyia*..... *Bruggmannia* Tav.
- d*². Circumfila in the female forming five irregular, anastomosing bands; ovipositor as in *Asphondylia*..... *Oxasphondylia* Felt.
- c*². Third vein uniting with costa near the distal fourth.
- d*¹. Palpi triarticulate, the circumfila low, very irregular, terminal clasp segment slender, unidentate, dorsal and ventral plates deeply emarginate..... *Acroëctasis* Rübs.
- b*³. Palpi uniarticulate.
- c*¹. Terminal clasp segment of the male subapical, conical.
Houardiella Kieff.

* Revised from *Proc. U. S. Nat. Mus.* (1915), 48, 197, 98.

- c*². Terminal clasp segment of the male bidentate.
- d*¹. Subcostal cell remarkably broad, a rudimentary vein spur at the base of subcosta..... *Zalepidota* Rübs.
- d*². Subcostal cell not remarkably broad, no rudimentary vein spur at the base of subcosta; terminal clasp segment with greatly produced, tapering spurs or horns..... *Diceromyia* gen. nov.
- a*². Ovipositor exerted, apicad with lobes or triangular plates; terminal clasp segment of the male usually serrate apicad.
- b*¹. Palpi quadriarticulate.
- c*¹. Terminal clasp segment of the male subapical; third and fourth antennal segments not fused, the circumfila coarsely reticulate in the male, the pulvilli longer than the claws. *Polystepha* Kieff.
- c*². Terminal clasp segment of the male apical; third and fourth antennal segments fused, the circumfila usually with many fine reticulations in the male, the pulvilli usually shorter than the claws..... *Cincticornia* Felt.
- b*². Palpi triarticulate.
- c*¹. Terminal clasp segment of the male serrate apicad.
- d*¹. Circumfila of male coarse, very irregular, 4 or 5 transverse fila to a segment, the plates of the ovipositor triangular. *Feltomyia* Kieff.*
- d*². Circumfila of male fine, about 18 transverse fila to a segment, the terminal lobes of the ovipositor roundly quadrate. *Eocincticornia* Felt.
- c*². Terminal clasp segment of the male bidentate, subapical, the ovipositor conical..... *Daphnephila* Kieff.
- b*². Palpi uniarticulate; flagellate antennal segments subsessile; abdomen with caducous scales, the short ovipositor biarticulate. *Ozobia* Tav.

ITONIDIDINARIÆ

Skeleton key to the genera.

BIFILI

- a*¹. Flagellate antennal segments of the male all binodose (p. 310).
- a*². Some of the flagellate antennal segments of the male cylindrical (p. 311).

TRIFILI

- a*¹. Claws toothed on all the legs (p. 312).
- b*¹. Palpi quadriarticulate (p. 312).
- b*². Palpi triarticulate, uniarticulate (p. 314).
- a*². Claws on the anterior legs (and sometimes middle legs) toothed (p. 315).
- b*¹. Palpi quadriarticulate (p. 315).
- c*¹. Circumfila greatly produced (p. 315).
- c*². Circumfila regular (p. 315).
- b*². Palpi triarticulate (p. 316).
- a*³. Claws all simple (p. 316).
- b*¹. Palpi quadriarticulate (p. 316).

* Judging from larval characters, this genus is closely related to and may possibly be a synonym of *Ulella* Rübsaamen.

- c*¹. Third vein before the apex (p. 316).
- c*². Third vein at the apex (p. 317).
- c*³. Third vein beyond the apex (p. 317).
- d*¹. Circumfila irregular (p. 317).
- d*². Circumfila regular (p. 317).
- b*². Palpi triarticulate (p. 320).
- b*³. Palpi biarticulate (p. 322).
- b*⁴. Palpi uniarticulate (p. 323).

ITONIDIDINARIÆ

Key to the genera.

BIFILI

- a*¹. Flagellate antennal segments of the male all binodose.
- b*¹. Palpi quadriarticulate.
 - c*¹. Claws on all legs toothed.
 - d*¹. Wings with greatly produced and broadly rounded areas posteriorly.
 - e*¹. Internal basal lobe of the basal clasp segment setose, the dorsal and ventral plates deeply emarginate, the lobes of the ventral plate very long, moderately narrow, the ovipositor very short, turned dorsad and not protractile.

Indodiplosis Felt.
 - e*². Internal basal lobe of the basal clasp segment smooth, the dorsal and ventral plates broadly and slightly emarginate, the ovipositor with a length one-half that of the abdomen, protractile.

Erosomyia Felt.
 - c*². Claws of anterior legs toothed.
 - d*¹. Wings normal, the posterior areas not greatly produced, the fifth antennal segment having the basal stem with a length about two and one-half times its diameter.

Toxomyia Felt.
 - c*³. Claws all simple.
 - d*¹. Costa thickened basad to form a spindle-shaped enlargement.
 - e*¹. All of the flagellate antennal segments of the male binodose and with circumfila; ovipositor aciculate.

Löwodiplosis Kieff.
 - d*². Costa not thickened basad.
 - e*¹. Wings of the male with the posterior area greatly produced and broadly rounded.
 - f*¹. Stems of the flagellate antennal segments of the male short, with a length about one-half the diameter, the harpes not strongly chitinized.

Lobopteromyia Felt.
 - f*². Stems of the flagellate antennal segments of the male with a length over twice their diameter, the harpes strongly chitinized and convolute.

Streptodiplosis Felt.
 - e*². Wings narrow, with a length at least three times the width, the ovipositor greatly produced, chitinized.

Thuraia Rübs.
 - e*³. Wings normal, neither specially broadened nor narrowed.
 - f*¹. Costa thickly clothed with scales, the third vein uniting with the margin before the apex of the wing.
 - g*¹. The first antennal segment with a dorsal tooth, the wing membrane with narrow scales.

Endaphis Kieff.

- g*². The first antennal segment not toothed, the mesonotum with two lines of golden scales, the wings with smoky spots, iridescent..... *Lasiodiplosis* Kieff.
- f*². Costa not scaled.
- g*³. Third vein uniting with the margin at the apex of the wing.
- h*¹. Third vein interrupting the margin.
- i*¹. Basal clasp segment not lobed; ovipositor long, slender; wings hyaline..... *Contarinia* Rond.
- i*². As in *Contarinia*, except that the wings are spotted. *Stictodiplosis* Kieff.
- i*³. Basal clasp segment with a triangular lobe basally; ovipositor short and with a semicircular ventral piece..... *Procontarinia* Kieff. and Cec.
- h*². Third vein not interrupting the margin at its union with costa.
- i*¹. Ventral plate not longer than the dorsal, bilobed; terminal clasp segment large, pubescent; ovipositor long..... *Thecodiplosis* Kieff.
- i*². Ventral plate linear, much longer than the dorsal, emarginate; terminal clasp segment slender, smooth; ovipositor slightly produced..... *Sitodiplosis* Kieff.
- g*². Third vein uniting with the margin beyond the apex of the wing.
- h*¹. Terminal clasp segment of the male short, thick, pubescent; fourteenth antennal segment of the female with a large conical appendage..... *Stephodiplosis* Tav.
- h*². Terminal clasp segment moderately long, not pubescent; fourteenth antennal segment of the female without a conspicuous appendage..... *Syndiplosis* Rübs.
- a*². Some flagellate antennal segments of the male cylindrical.
- b*¹. Palpi quadriarticulate.
- c*¹. All the flagellate antennal segments of the male cylindrical.
- d*¹. Claws toothed, curved at almost right angles.
- e*¹. Circumfila low; terminal clasp segment slender, the lobes of the dorsal plate rounded..... *Holobremia* Kieff.*
- d*². Claws simple.
- e*¹. Ventral plate a little longer than the dorsal plate; terminal clasp segment short, plainly swollen near the middle. *Geisenheyneria* Rübs.*
- e*². Ventral plate linear, emarginate apically, much longer than the dorsal plate; terminal clasp segment slender. *Monodiplosis* Rübs.*
- e*³. Dorsal plate divided, the lobes triangular; ventral plate a little longer, linear, rounded; terminal clasp segment somewhat enlarged, slightly arched; ovipositor not produced. *Stroblophila* Kieff.
- c*². Terminal flagellate antennal segments cylindric.
- d*¹. Circumfila with a length one-half the setæ, the stems shorter than the nodes, those of the two terminal segments wanting

* Location provisional.

- or almost wanting, the terminal clasp segment large, greatly swollen; ventral plate entire..... Halodiplosis Kieff.
- d*². Circumfila with short bows, the thirteenth and fourteenth segments with short stems; terminal clasp segment slender; ventral plate longer than the dorsal and deeply emarginate.
Ametrodiplosis Rübs.
- d*³. Circumfila rudimentary.
- e*¹. Costa with a fusiform swelling basad, the basal stem of the fifth antennal segment with a length equal to its diameter; ventral plate much longer than the dorsal, much constricted and with a deep, straight incision, the lobes pointed; terminal clasp segment arched and long..... Cyrtodiplosis Kieff.
- e*². Costa not thickened basad, the basal stem of the fifth antennal segment with a length equal to the basal enlargement, the ventral plate sublinear, longer than the dorsal, narrowly incised and with two straight lobes; terminal clasp segment long, slender, curved..... Anthodiplosis Kieff.
- b*². Palpi triarticulate.
- c*¹. Basal clasp segment with a conspicuous triangular process apicad.
- d*¹. Terminal clasp segment subapical, the claws as long as the pulvilli..... Dentifibula Felt.
- c*². Basal clasp segment without a process apicad.
- d*¹. Terminal clasp segment stout, with a length about three times its diameter; ventral plate almost truncate... Myricomyia Kieff.
- d*². Terminal clasp segment ellipsoidal, pubescent.
- e*¹. Ovipositor short, the length about equal to its diameter.
Zeuxidiplosis Kieff.
- e*². Ovipositor long, striate..... Stenodiplosis Reut.
- b*³. Palpi biarticulate.
- c*¹. Third vein extending beyond the apex, the terminal clasp segment short, moderately stout, the dorsal plate short, deeply and triangularly emarginate..... Anadiplosis Tav.
- b*⁴. Palpi uniarticulate.
- c*¹. Third vein uniting with the margin well beyond the apex, the dorsal and ventral plates both long and emarginate.
Kronodiplosis g. nov.
- TRIFILI
- a*¹. Claws toothed on all the legs.
- b*¹. Palpi quadriarticulate.
- c*¹. Circumfila with one or more greatly produced bows or loops having a length five to ten times that of the enlargement and extending at approximately right angles to it.
- d*¹. Three well-developed circumfila on each flagellate antennal segment.
- e*¹. The three circumfila irregular, the pulvilli rudimentary, the ventral plate spatulate..... Tribremia Kieff.
- e*². Two circumfila irregular and one regular, the circumfilum on the basal enlargement with two greatly produced loops and the one on the distal enlargement with a shorter bow or loop,
- f*¹. Pulvilli a little shorter than the claws..... Isobremia Kieff.
- f*². Pulvilli rudimentary or wanting..... Cryptobremia Kieff.

- e*³. One circumfilum irregular and with a bow or loop greatly produced, the other two circumfila regular, the style simple.
- f*¹. Ventral plate large, oval, as long as or a little longer than the dorsal; pulvilli equal to or longer than claws.
Aphidoletes Kieff.
- d*². Two well-developed, irregular circumfila; basal circumfilum on the distal enlargement forming a low band; pulvilli small.
- e*¹. Legs clothed with hairs, the style not arched.
- f*¹. Flagellate antennal segments with the distal enlargement produced, the basal subglobose, the ventral plate linear, not emarginate and as long as the simple style... Bremia Rond.
- f*². Flagellate antennal segments with two subglobose enlargements, the ventral plate linear, emarginate and much shorter than the emarginate style..... Homobremia Kieff.
- e*². Legs clothed with scales, the style strongly arched basally.
- f*¹. Ventral plate shorter than the dorsal, linear and rounded distally..... Lepidobremia Kieff.
- c*². Circumfila nearly regular and without one or more greatly produced bows or loops.
- d*¹. Basal clasp segment with a basal lobe.
- e*¹. Flagellate antennal segments trinodose; terminal clasp segment much produced, plainly longer than the basal clasp segment; ovipositor short and with large, orbicular lobes.
Youngomyia Felt.
- e*². Flagellate antennal segments binodose; terminal clasp segment not greatly produced, the ventral plate linear, a little longer than the dorsal plate; ovipositor moderately short and with long, densely haired lobes..... Therodiplosis Kieff.
- d*². Basal clasp segment without a distinct basal lobe.
- e*¹. Claws curved nearly at right angles.
- f*¹. Palpi long or moderately long.
- g*¹. Ventral plate linear, broadly emarginate; dorsal plate long, broad, triangularly emarginate, the circumfila slightly irregular, the style with filiform branches.
Plesiobremia Kieff.
- g*². Ventral plate long, narrowly rounded apically; dorsal plate broad, deeply and broadly emarginate, the lobes moderately narrow apically..... Dichodiplosis Rübs.
- g*³. Dorsal and ventral plates short, broad and deeply emarginate..... Thomasia Rübs.
- f*². Palpi short, the second antennal segment with a length one-half greater than its diameter..... Collinia Kieff.
- e*². Claws not strongly curved basad and therefore not forming almost a right angle.
- f*¹. Circumfila with numerous loops, about twenty.
- g*¹. Lobes of the ventral plate linear and parallel; ovipositor rather short..... Geodiplosis Kieff.
- f*². Circumfilar loops short, the hairs two to three times longer.
- g*¹. Lobes of the ventral plate short, broadly rounded; ovipositor short..... Calodiplosis Tav.
- f*³. Circumfilar loops normally long and not excessively numerous.

- g*¹. Cross vein well developed and nearly parallel with costa as in the Porricondylariæ..... *Lopesia* Rübs.*
- g*². Cross vein not well developed and nearly parallel with costa as in the Porricondylariæ.
- h*¹. Terminal clasp segment slender; lobes of the dorsal and ventral plates truncate; ovipositor short and with long, narrowly oval lobes..... *Resseliella* Seitz.
- h*². Terminal clasp segment stout; lobes of the dorsal and ventral plates narrowly rounded, the dorsal plate broadly, and the ventral plate deeply, emarginate; ovipositor long, with imperfectly divided lobes.
Harmandia Kieff.
- f*⁴. Genera known only as females and presumably belonging here in the key.
- g*¹. Ovipositor slightly protractile, the lobes long, curved, and with two or three longitudinal subventral rows of obtuse spines..... *Dicrodiplosis* Kieff.
- g*². Ovipositor about half the length of the abdomen, the lobes with a length about six times the width; mouth parts prolonged..... *Delphodiplosis* Felt.
- g*³. Ovipositor moderately long, with a subcylindrical, dorsal part and a ventral oval plate with a narrowly triangular incision about one-fourth its length... *Schizodiplosis* Kieff.
- g*⁴. Ovipositor short, with three subcircular lobes, the ventral a little smaller than the two dorsal..... *Cacoplecus* Kieff.
- b*². Palpi triarticulate.
- c*¹. Flagellate antennal segments of female subcylindric.
- d*¹. Male with three well-developed circumfila, though without greatly produced bows or loops.
- e*¹. Circumfila with the loops short, thick and very numerous, each stem with a length less than its diameter; palpi moderately long; pulvilli rudimentary; dorsal and ventral plates long, the latter deeply emarginate and with relatively narrow lobes..... *Kalodiplosis* Felt.
- e*². Circumfila with the loops only moderately numerous, not unusually thick, each stem with a length about twice its diameter, the palpi greatly reduced; dorsal and ventral plates very short, both emarginate.
- f*¹. Ovipositor short, the terminal lobes narrowly oval, the dorsal and ventral plates short, emarginate.
Kamptodiplosis g. nov.
- f*². Ovipositor about one-third the length of the abdomen, the basal portion long, stout, tapering, the lobes slender.
Male unknown..... *Heliodiplosis* g. nov.
- d*². Male with two long circumfila, the second rudimentary, the loops not numerous, the pulvilli shorter than the claws, the dorsal and ventral plates deeply and roundly emarginate.
Roachadiplosis Tav.

* Included because of antennal structure although this insect belongs in the Porricondylariæ.

*c*². Flagellate antennal segments of female, at least some, binodose.

*d*¹. Female with two low circumfila on the cylindric distal enlargement of the flagellate antennal segments, none on the basal swelling; ovipositor about one-half the length of the body.

Epihormomyia Felt.

*b*³. Palpi uniarticulate.

*c*¹. Cross vein well developed and nearly parallel with costa; claws quadridentate..... *Allodiplosis* Kieff. and Jörg.

*c*². Cross vein not well developed and nearly parallel with costa; claws bidentate; circumfila very conspicuous and low as in *Asphondylia*..... *Frauenfeldiella* Rübs.*

*a*². Claws on the anterior legs and sometimes those of the middle legs toothed, those of the posterior legs simple.

*b*¹. Palpi quadriarticulate.

*c*¹. Circumfila with one or more greatly produced bows or loops having a length five to ten times that of the enlargement and extending at approximately right angles to it.

*d*¹. Two irregular circumfila, one regular.

*e*¹. Pulvilli nearly equal to the claws, the ventral plate elongate distad, subcaudate..... *Phænobremia* Kieff.

*d*². One circumfilum irregular, two regular.

*e*¹. Pulvilli one-half the length of the claws; ventral plate straight, linear and much longer than dorsal plate... *Monobremia* Kieff.

*c*². Circumfila regular or nearly so and without greatly produced bows or loops.

*d*¹. Basal clasp segment lobed.

*e*¹. The lobe apical, setose or spinose; terminal clasp segment subapical..... *Lobodiplosis* Felt.

*e*². The lobe subbasal, glabrous; terminal clasp segment short and bidentate..... *Antichiridium* Rübs.

*e*³. The lobe basal, setose or nearly glabrous.

*f*¹. Ventral plate or harpes strongly chitinized.

Coquilletomyia Felt.

*f*². Ventral plate and harpes as in *Lestodiplosis* and not chitinized..... *Feltiella* Rübs.

*d*². Basal clasp segment not distinctly lobed.

*e*¹. Terminal clasp segment subfusiform, distinctly dilated; harpes strongly chitinized and very complex..... *Karschomyia* Felt.

*e*². Terminal clasp segment not as above.

*f*¹. Claws curved nearly at right angles.

*g*¹. Ventral plate greatly elongate and emarginate apicad; dorsal plate deeply cleft and triangularly emarginate.

Clinodiplosis Kieff.

*g*². Ventral plate rounded apicad; dorsal plate deeply and narrowly divided..... *Oribremia* Kieff.

*g*³. Ventral plate broad, broadly and roundly emarginate, as long as the dorsal plate, the latter deeply and triangularly emarginate..... *Profeltiella* Kieff.

* Possibly belongs in the *Asphondyliariae*.

- f*². Claws not strongly curved and therefore not forming almost a right angle.
- g*¹. Ventral plate almost linear, straight and much longer than the dorsal plate..... *Acaroletes* Kieff.
- g*². Ventral plate not greatly produced; lobes of the dorsal plate not divided, cleft or triangularly emarginate; female flagellate antennal segments with normal, low circumfila; ovipositor short..... *Mycodiplosis* Rübs.
- g*³. The female differs from *Mycodiplosis* in the two circumfila being produced as distinct and very short bows. Male unknown..... *Camptodiplosis* Kieff.*
- b*². Palpi triarticulate.†
- c*¹. Claws not bent at nearly right angles; three well-developed circumfila.
- d*¹. Terminal clasp segment not greatly produced; ventral plate short and broad..... *Diadiplosis* Felt.
- d*². Terminal clasp segment greatly produced, with a length twice that of the basal clasp segment; ventral plate longer than the dorsal, moderately broad, rounded apically.... *Xiphodiplosis* Felt.
- c*². Claws bent at nearly right angles; two well-developed and one rudimentary circumfilum; ventral plate linear, roundly emarginate apically..... *Chelobremia* Kieff.
- a*³. Claws simple or not toothed on any of the legs.
- b*¹. Palpi quadriarticulate.
- c*¹. The third vein uniting with the margin before the apex of the wing.
- d*¹. Wings hyaline.
- e*¹. Pulvilli as long or nearly as long as the claws.
- f*¹. Stems of the flagellate antennal segments mostly with a length less than the diameter; circumfila rather short; ventral plate deeply bilobed, not greatly produced.
Arthrocnodax Rübs. (*Feltodiplosis* Kieff.).
- f*². Stems of the flagellate antennal segments probably rather long; circumfila moderately long; ventral plate much longer than dorsal plate, slender, greatly enlarged apicad, the distal portion with a width twice its breadth and slightly emarginate apicad..... *Microdiplosis* Tav.
- e*². Pulvilli one-half the length of the claws or less.
- f*¹. Terminal clasp segment swollen and long-haired basally, distally slender and smooth; ovipositor not produced.
Silvestrina Kieff.
- f*². Male unknown; female with the pulvilli hardly one-third the length of the sickle-shaped claws..... *Planodiplosis* Kieff.‡
- d*². Wings densely brown-haired, with clearer spots; costa with black scales as in *Lasioptera*.
- e*¹. Antennal hairs finely denticulate; thorax densely covered with yellow scales..... *Chrysodiplosis* Kieff.

* This genus, *Baeodiplosis* Kieff., and *Alethediplosis* Tav. are known only in the female and presumably fall here in the tabulation.

† *Epihormomyia* Felt (see p. 315) may fall here in the key.

‡ Location provisional.

- c*². Third vein uniting with costa at the apex of the wing.
- d*¹. Claws as long as the pulvilli.
- e*¹. Wings hyaline.
- f*¹. Dorsal plate bilobed, the lobes rounded apically; ventral plate a little longer, straight, linear and slightly emarginate.
Endopsylla Meij.
- e*². Wings bluish black, spotted with white.
- f*¹. Dorsal and ventral plates bilobed, the lobes large and rounded apically..... *Doxodiplosis* Kieff.
- d*². Claws plainly much longer than the pulvilli.
- e*¹. Metatarsus almost one-half the length of the second tarsal segment; dorsal plate bilobed; ventral plate linear and rounded apicad; ovipositor short..... *Plagiodiplosis* Kieff.
- e*². Metatarsus presumably less than one-half the length of the second tarsal segment; ovipositor as long as the body. Male unknown..... *Orthodiplosis* Kieff.
- c*³. Third vein uniting with costa beyond the apex of the wing.
- d*¹. Circumfila irregular, one or more loops being greatly produced.
- e*¹. Wings hyaline.
- f*¹. Ventral plate much longer than the dorsal plate and rounded apically..... *Hadrobremia* Kieff.
- f*². Ventral plate longer than the dorsal, bilobed.
Anabremia Kieff.
- e*². Wings yellow with black spots.
- f*¹. Legs spotted, thickly scaled; pulvilli nearly as long as the claws..... *Plutodiplosis* Kieff.
- d*². Circumfila with short bows or wanting.
- e*¹. Wings hyaline.
- f*¹. Some of the flagellate antennal segments cylindric.
- g*¹. Circumfila rudimentary or wanting; tenth to fourteenth segments cylindrical; harpes somewhat inflated.
Prodiplosis Felt.
- g*². Circumfila distinct though low, all the flagellate or only the distal antennal segments cylindrical; male antennæ about as long as the body; ovipositor short.
Caryomyia Felt.
- f*². Flagellate antennal segments binodose in the male.
- g*¹. Stems shorter than the enlargement, sometimes transverse.
- h*¹. Stems very short, transverse, antennæ about as long as the body; ovipositor short..... *Caryomyia* Felt.
- h*². Stems shorter than the enlargement; ovipositor long.
Macrodiplosis Kieff.
- f*³. Flagellate antennal segments probably binodose in the male, this sex being unknown.
- g*¹. Ovipositor short, the lobes bearing, laterad or ventrad, rows of heavy, truncate or club-shaped processes.
Ctenodiplosis Kieff.
- g*². Ovipositor short, the lobes without conspicuous processes.
- h*¹. Pulvilli as long as the claws.
- i*¹. Basal flagellate antennal segments of female cylindrical..... *Eohormomyia* Felt.

- i*². Basal flagellate antennal segments of female plainly binodose..... Androdiplosis Felt.
- h*². Pulvilli rudimentary..... Diplecus Kieff.
- e*². Wings spotted.
- f*¹. Terminal clasp segment very slender, subfiliform and smooth, the ovipositor short..... Nanodiplosis Kieff.
- d*³. Circumfila well developed and not conspicuously irregular, the loops mostly as long as or longer than the diameter of the enlargement.
- e*¹. Claws bent at nearly right angles.
- f*¹. Basal clasp segment lobed.
 - g*¹. Terminal clasp segment slender, curved, the ventral plate straight, pubescent..... Octodiplosis Giard.
 - g*². Terminal clasp segment as long as the basal clasp segment, enlarged and bilobed apicad; ventral plate almost linear and rounded apically..... Trichodiplosis Kieff.
 - f*². Basal clasp segment not lobed.
 - g*¹. Ventral plate long, slender, slightly expanded and roundly emarginate apicad; dorsal plate short, triangularly emarginate..... Giardomyia Felt.
 - g*². Ventral plate long, broad, very deeply and broadly emarginate; dorsal plate deeply and roundly emarginate.
 - Hyperdiplosis Felt.
 - g*³. Ventral plate large, long and roundly excavated; dorsal plate bilobed, the lobes obliquely truncate.
 - Mycetodiplosis Kieff.
 - g*⁴. Male unknown, female with the ovipositor short, the pulvilli rudimentary..... Chætodiplosis Kieff.*
 - e*². Claws not bent at right angles.
 - f*¹. Basal clasp segment lobed.
 - g*¹. The lobe apical.
 - h*¹. The lobe very long, curved, setose; terminal clasp segment swollen basad..... Epidiplosis Felt.
 - h*². The lobe triangular; terminal clasp segment short, greatly constricted near the middle and enormously swollen and recurved apicad..... Metadiplosis Felt.
 - h*³. The lobe small, densely haired; basal clasp segment with a length one-half that of the abdomen; circumfila each with twenty-six loops..... Cœlodiplosis Kieff.
 - h*⁴. The lobe membranous and extending from the basal clasp segment to the dorsal plate; terminal clasp segment with a similar membranous expansion.
 - Tristephanus Kieff.
 - g*². The lobe basal.
 - h*¹. The lobe obtuse.
 - i*¹. Ventral plate long, broad, broadly rounded; claws a little longer than the pulvilli..... Orseoliella Kieff.
 - i*². Ventral plate short, deeply bilobed; claws much longer than the pulvilli..... Isodiplosis Rübs.

* See also under *g*⁶ on page 320.

- h*². The lobe triangular.
- i*¹. Anterior legs with the underside of tibia and the first two tarsal segments with erect groups of hairs.
Lamprodiplosis Kieff.
- i*². Anterior legs without conspicuous groups of hairs.
- j*¹. Wings spotted..... Lestodiplosis Kieff.
- j*². Wings not spotted..... Coprodiplosis Kieff.
- f*². Basal clasp segment not conspicuously lobed.
- g*¹. Basal enlargement of the trinodose flagellate antennal segments with two circumfila, the distal with but one.
- h*¹. Ventral plate sublinear, tapering, rounded apicad and much longer than the dorsal plate.... Xenodiplosis Felt.
- g*². Anterior femur of the male plainly enlarged, it being three times the size of the tibia.
- h*¹. Terminal clasp segment as long as the basal; ovipositor long, with a conical, fleshy apex..... Eumerosema Kieff.
- g*³. Antennal segments plainly trinodose.
- h*¹. Dorsal plate divided, its lobes orbicular.
Obolodiplosis Felt.
- g*⁴. Antennal segments short, thick, the stems transverse, the enlargements short, broad.
- h*¹. Circumfila fine, rather short, each with numerous (about 20) loops; genitalia moderately stout, dorsal and ventral plates bilobed..... Retinodiplosis Kieff.
- g*⁵. Without the striking characters listed under *g*¹ to *g*⁴.
- h*¹. Ventral plate linear, rounded apically.
- i*¹. Dorsal plate much shorter than the ventral plate, the lobes truncate..... Parallelodiplosis Rübs.
- i*². Dorsal plate longer than the ventral plate.
Blastodiplosis Kieff.
- h*². Ventral plate long, spatulate.
- i*¹. Dorsal plate moderately long, broad, deeply and triangularly emarginate, the lobes broad, obliquely and roundly emarginate..... Hypodiplosis Kieff.
- h*³. Ventral plate greatly produced and lobed.
- i*¹. Ventral plate broadly and roundly emarginate, the lobes diverging and broad..... Brachydiplosis Rübs.
- i*². Ventral plate triangularly emarginate, the lobes triangular, the ovipositor short..... Eudiplosis Tav.
- i*³. Ventral plate divided, the lobes very long and spatulate.
Styraxdiplosis Tav.
- h*⁴. Ventral plate broad and broadly or triangularly emarginate.
- i*¹. Lobes of the ventral plate linear and parallel.
- j*¹. The male with 14 and the female with 13 antennal segments; claws almost equal to the pulvilli; ovipositor long and filiform.
Delodiplosis Tav.
- j*². Male and female with 14 antennal segments; claws as long as the pulvilli; ovipositor stout and long.
Phyllodiplosis Kieff.

*i*². Lobes of the ventral plate not linear and parallel.

*j*¹. Dorsal plate deeply incised, the lobes narrowly rounded, the terminal clasp segment with a broadly chitinized, serrate margin..... *Paradiplosis* Felt.

*j*². Dorsal plate not incised or very narrowly emarginate.

*k*¹. Genitalia large, with a length one-fourth that of the abdomen; ventral-plate lobes slender and diverging; ovipositor short and with subtriangular lobes..... *Plesiodiplosis* Kieff.

*k*². Genitalia smaller, ovipositor not as described above.

*l*¹. Terminal clasp segment large, swollen near the middle and hairy; ovipositor long, with short hairs and short-haired lobes.

Plemeliella Seitz.

*l*². Terminal clasp segment with a length one-half that of the basal clasp segment and slightly tapering; ovipositor conical and with a length twice its basal diameter.. *Pachydiplosis* Kieff.

*l*³. Terminal clasp segment as long or nearly as long as the basal clasp segment and smooth; ovipositor moderately long and with lobes.

Itonida Meig.

*g*⁶. Genera known only as females.*

*h*¹. Cross vein present and well developed; pulvilli one-half as long as the claws; ovipositor small, produced.

Liebliola Kieff. and Jörg.†

*h*². Cross vein not well developed.

*i*¹. Ovipositor several times the length of the body; pulvilli less than one-half the length of the claws.

Xylodiplosis Kieff.

*i*². Ovipositor as long as the body, the latter covered with scales; pulvilli rudimentary..... *Lepidodiplosis* Kieff.

*i*³. Ovipositor short; pulvilli rudimentary.

Chaetodiplosis Kieff.

*i*⁴. Ovipositor short, the terminal lobes slender and with a length nearly equal to a body segment.

Ouradiplosis Felt.

*b*². Palpi triarticulate.

*c*¹. Circumfila with short bows or loops, their length being one-half the diameter of the enlargement or less.

*d*¹. Thorax plainly extending over and concealing the head, at least to a considerable extent.

*e*¹. Male with 23 antennal segments, female with 14; the last or several of the distal segments in the male simple.

Hormomyia H. Lw.

*e*². Male with 36 antennal segments; flagellate segments all binodose and the stems short..... *Proshormomyia* Kieff.

* Location provisional.

† Probably referable to the *Porricondylariæ*.

- e*³. Male and female with 14 antennal segments; flagellate segments of the female with 3 circumfila.... *Trishormomyia* Kieff.
- d*². Thorax not produced over the head to a marked degree.
- e*¹. Flagellate antennal segments of the male binodose.
- f*¹. Basal clasp segment unarmed.
- g*¹. Style not expanded apicad and with the sides not strongly chitinized.
- h*¹. Third vein uniting with the margin well beyond the apex; wings long or rather long.
- i*¹. Female with 3 circumfila on the flagellate antennal segments; ovipositor as long as the body.
Pseudhormomyia Kieff.
- i*². Female with 2 circumfila on the flagellate antennal segments; ovipositor not long..... *Dyodiplosis* Rübs.
- h*². Third vein uniting with the margin before or near the apex, wings rather short, broad; flagellate antennal segments of the male binodose and with very short stems or cylindrical; male antennæ about as long as the body; ovipositor short..... *Caryomyia* Felt.
- g*². Style expanded apicad and with the sides strongly chitinized.
- h*¹. Dorsal plate triangularly emarginate; ventral plate long, broad, broadly and roundly emarginate.
Massalongia Kieff.
- f*². Basal clasp segment with a spine mesially.
- g*¹. Pulvilli very small..... *Microplecus* Kieff.
- g*². Pulvilli nearly as long as the claws..... *Holodiplosis* Kieff.
- e*². Flagellate antennal segments of the male cylindrical, at least some.
- f*¹. Third vein uniting with the margin near the apex; wings rather short, broad; male flagellate antennal segments binodose, with short stems or cylindrical; male antennæ about as long as the body; ovipositor short.
Caryomyia Felt.
- c*². Circumfilar loops with a length equal to the diameter of the enlargement or longer.
- d*¹. Wings hyaline.
- e*¹. Basal clasp segment lobed.
- f*¹. Genitalia very long, slender, the length equal to two-thirds that of the abdomen..... *Ischnodiplosis* Kieff.
- f*². Genitalia moderate in size; ventral plate chitinized and denticulate..... *Odontodiplosis* Felt.
- e*². Basal clasp segment not distinctly lobed.
- f*¹. The third vein uniting with the margin before or at the apex of the wing.
- g*¹. Dorsal half of each eye segregated from ventral half and uniting on vertex to form a third eye group.
Trisopsis Kieff.
- g*². Eyes normal and not so widely separated.
- h*¹. Claws a little longer than the pulvilli.
- i*¹. Terminal clasp segment slender and smooth; dorsal

- and ventral plates bilobed; ovipositor short and with biarticulate lobes..... *Tricontarinia* Kieff.
- i*². Ovipositor large, short and with obtuse lobes. *Atrichosema* Kieff.*
- h*². Claws small, much shorter than the pulvilli; ovipositor moderately long..... *Hydrodiplosis* Kieff.*
- f*². Third vein uniting with the margin beyond the apex of the wing.
- g*¹. Fifth antennal segment of the female with a slight enlargement and a peculiar sensory organ near the middle. *Trissodiplosis* Kieff.
- g*². Second antennal segment prolonged ventrally as an obtuse lobe; ovipositor short and with two long lobes. *Acodiplosis* Kieff.
- g*³. Antennal segments normal, without unusual processes or organs.
- h*¹. Dorsal plate deeply and triangularly emarginate.
- i*¹. Ventral plate triangular, broadly and roundly emarginate; ovipositor long and the lobes long. *Taphodiplosis* Kieff.
- i*². Ventral plate linear, straight, not emarginate; ovipositor moderately long and the lobes long. *Haplodiplosis* Rübs.†
- i*³. Ventral plate linear, roundly emarginate; ovipositor aciculate and straight..... *Centrodiplosis* Kieff.
- h*². Dorsal plate deeply and narrowly incised.
- i*¹. Ventral plate broad and rounded; female unknown. *Adiplosis* Felt.
- i*². Ventral plate narrowly emarginate; ovipositor moderately long, the lamellæ deeply bilobed. *Löwiola* Kieff.
- h*³. Genera provisionally placed here, the females only being known.
- i*¹. Two circumfila, each with six to eight short bows; claws as long as the pulvilli..... *Plecophorus* Kieff.
- i*². The two circumfila are flat or nearly so, otherwise as in *Plecophorus*..... *Aplecus* Kieff.
- d*². Wings spotted.
- e*¹. Third vein uniting with the margin beyond the apex of the wing; pulvilli nearly as long as the claws. *Stictobremia* Kieff.
- e*². Third vein uniting with the margin at the apex of the wing; cross vein is present as in the *Porricondylariæ*. *Ampelosucta* De Stef.‡
- b*³. Palpi biarticulate.
- c*¹. Wings hyaline.
- d*¹. Circumfila short or only moderately long.
- e*¹. Thorax not produced over the head.

* Only the female is known; location provisional.

† *Putoniella* Kieff. will probably fall here in the table.

‡ This genus may belong in the *Heteropezinae*.

- f*¹. Circumfila apparently doubled in both sexes; third vein uniting with the margin at the apex of the wing; pulvilli as long as the claws; ovipositor short, with three lobes.
Dichrona Rübs.
- f*². Circumfila not apparently doubled, low and with eight to ten small bows; third vein uniting with the margin beyond the apex of the wing; ovipositor large, conical and with two long lobes; male unknown..... Perodiplosis Kieff.
- e*². Thorax produced over the head.
- f*¹. Circumfila not apparently doubled in the female; third vein uniting with the margin beyond the apex of the wing; pulvilli about one-half the length of the claws.
Dishormomyia Kieff.
- d*². Circumfila long or at least moderately long.
- e*¹. One or more basal antennal segments with an eccentric development or tooth.
- f*¹. Second antennal segment with a large lateral and oblique conical process; thorax produced as a cone in front but not covering the head..... Conodiplosis Kieff. and Jörg.
- f*². Second antennal segment prolonged ventrally as an obtuse lobe..... Neurodiplosis Kieff.
- f*³. The stem of the first flagellate antennal segment of the male with a lateral tooth near its middle; dorsal plate narrowly incised, ventral plate longer and rounded apicad.
Orseolia Kieff. and Mass.
- e*². Basal antennal segments without eccentric development or processes.
- f*¹. Dorsal plate broad, broadly and roundly emarginate; ventral plate broad, triangular and slightly emarginate; ovipositor short, with two large, oval lobes bearing transverse rows of obtuse spines apicad..... Braueriella Kieff.
- f*². Dorsal plate with the lobes obtusely truncate; ventral plate longer, linear, deeply and roundly emarginate; ovipositor short and with two lanceolate lobes..... Compsodiplosis Tav.
- f*³. Dorsal plate triangularly divided; ventral plate long, broad, roundly and slightly emarginate; style longer, rounded apically and the lateral margin strongly chitinized; ovipositor long, with two lanceolate lobes..... Massalongia Kieff.
- f*⁴. Male unknown.
- g*¹. Ovipositor short, with a chitinized falciform blade.
Jörgensenia Kieff.
- g*². Ovipositor moderately short, the two lobes elongate.
Courteia Kieff.
- c*². Wings marked with yellow and fuscous.
- d*¹. Fifth antennal segment with a stem one-half the length of the basal enlargement, which has a length four times its diameter; third and fourth segments free; third vein joins the margin beyond the apex of the wing; ovipositor short, the lobes angulate..... Scopodiplosis Felt.
- b*⁴. Palpi uniarticulate.
- c*¹. Circumfila apparently doubled in the male and female.
- d*¹. Pulvilli as long as the claws; ovipositor short and with three lobes..... Dichrona Rübs.

*c*². Circumfila not apparently doubled in the male and female.

*d*¹. Wings hyaline.

*e*¹. Fourteen antennal segments in both sexes, the third and fourth not fused, the basal and distal enlargements globose and pyriform, respectively; dorsal and ventral plates deeply emarginate; ovipositor short, chitinous, falcate.

Monarthropalpus Rübs.

*e*². Fourteen antennal segments, the fifth in the female with a stem one-third the length of the basal enlargement, which has a length two and one-half times its diameter; third and fourth antennal segments free; ovipositor stout, with a length one-half that of the abdomen, the distal part thickly clothed with long, silky hairs; male with moderately short circumfila, the fifth antennal segment having stems the length of which is twice the diameter; dorsal plate deeply, and ventral plate broadly, emarginate..... Onodiplosis Felt.

*e*³. Thirteen antennal segments in the female, the third and fourth fused, the basal and distal nodes globose and ovoid, respectively; dorsal and ventral plates bilobed; ovipositor short, chitinous, needlelike..... Cystodiplosis Kieff.

*d*². Wings black and yellow marked.

*e*¹. Basal and distal enlargement of the flagellate antennal segments globose and cylindrical, respectively; harpes forming a spinose, chitinous tube surrounding the style; ovipositor short, its lobes lanceolate..... Astrodiplosis Felt.

ILLUSTRATION

PLATE I

- FIG. 1. *Luzonomyia symphoremæ* Felt, g. et sp. nov.; male genitalia, diagrammatic, greatly enlarged. The shading indicates chitinization. (Original.)
2. *Luzonomyia symphoremæ* Felt, g. et sp. nov.; side view of ovipositor, diagrammatic. (Original.)
3. *Diceromyia vernoniæ* Felt, g. et sp. nov.; male genitalia, somewhat diagrammatic, greatly enlarged. Note in particular the greatly produced spines of the terminal clasp segment, dorsal and ventral plates not illustrated. The shading indicates chitinization. (Original.)
4. *Kronodiplosis uichancoi* Felt, g. et sp. nov.; third antennal segment of male, showing setæ and circumfila; diagrammatic, greatly enlarged. (Original.)
5. *Kamptodiplosis reducta* Felt, g. et sp. nov.; fifth antennal segment of male, showing general shape, setæ, and circumfila; diagrammatic, greatly enlarged. (Original.)
6. *Kamptodiplosis reducta* Felt, g. et sp. nov.; male genitalia, diagrammatic, greatly enlarged. (Original.)
7. *Heliodiplosis spatholobi* Felt, g. et sp. nov.; side view of ovipositor of female, diagrammatic, greatly enlarged. The shading indicates chitinization. (Original.)

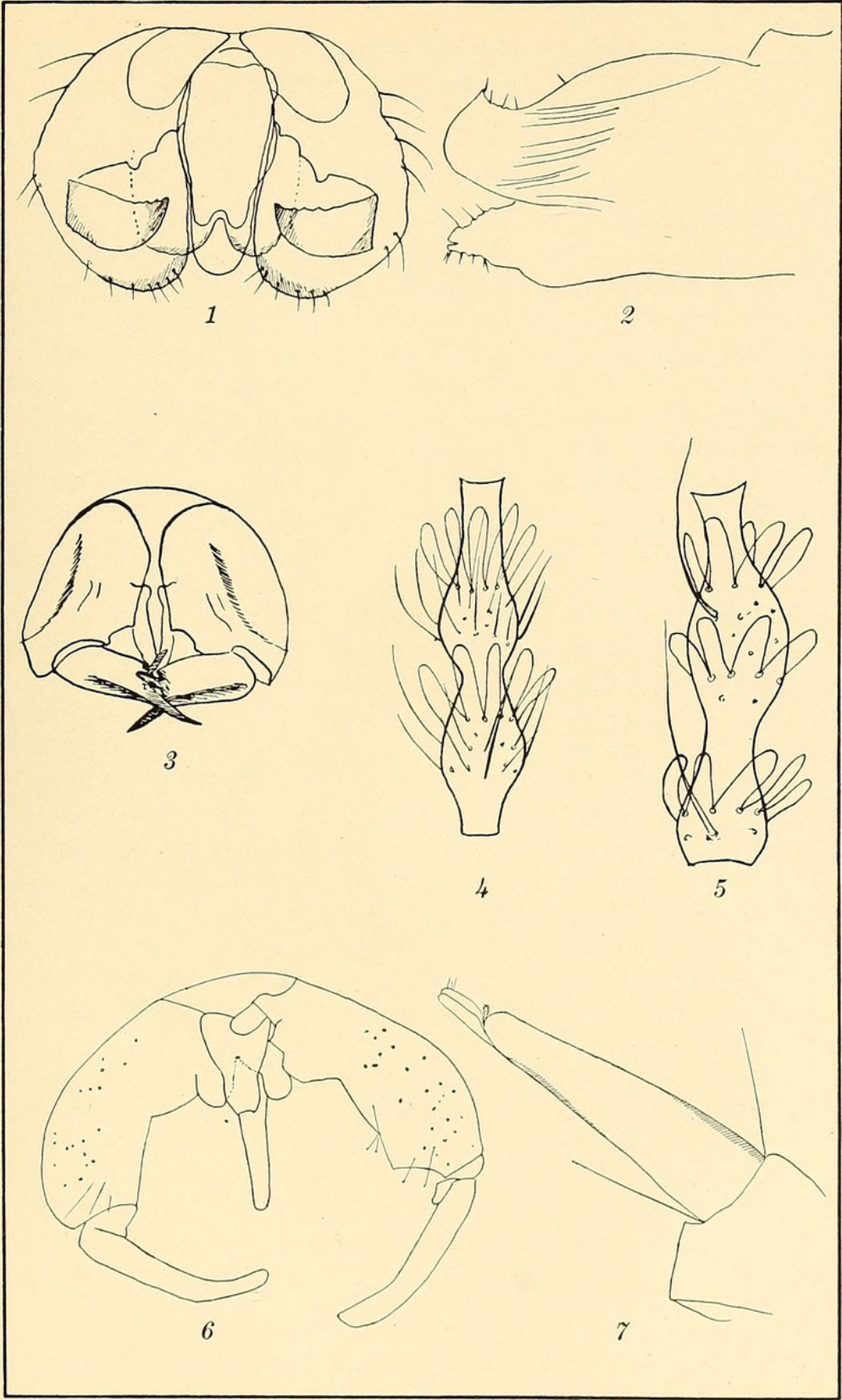


PLATE I. CHARACTERS OF NEW PHILIPPINE GALL MIDGES.



Felt, Ephraim Porter. 1918. "New Philippine gall midges, with a key to the Itonididae." *The Philippine journal of science* 13, 281–325.

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