JAVANESE GALL MIDGES

by

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(With 5 figures)

The following descriptions and observations relate to a small and very interesting collection of gall midges submitted for study by Doctor W. Docters van Leeuwen, Director of the Buitenzorg Botanical Gardens, under date of February 20, 1920.

The rearings show that two species of the remarkable *Stefaniella* occur in Java though it should be noted that they are not entirely characteristic for the genus. The two species of *Lasioptera* reared are noteworthy because of the free third and fourth antennal segments, a generalized condition not observed in long series of American species. The two species of *Schizomyia,* notably *S. nodosa* and *S. villebrunnea,* are peculiar because of the distinctly trinodose characteristic of the flagellate antennal segments, particularly the distal ones and in the case of the first named, there is a very interesting symmetry in the development of the circumfila. It is possible that these two species should be referred to a distinct genus.

The rearing of the Philippine *Lasioptera manilensis* Felt and *Asphondylia callicarpae* Felt and the recent discovery of the probable identity of the Philippine *Asphondylia vitea* Felt with the Javanese *A. viticola* K. & L., are all suggestive that further exploration will show considerable in common

between the faunae of these Islands, a condition by no means unexpected since both are located in the same faunal region. Enough is known to show that these two areas contain many very interesting gall midges. A considerable number are presumably unknown and there is therefore every probability of many interesting forms being brought to light as a result of further studies. We would in this connection call attention to the desirability of investigating the non-gall making midges, a group presenting many extremely interesting variations in both habits and structure.

Dasyneura elatostemmae n. sp.

Midges described below were reared from petiole galls on a species of *Elatostemma* and bore the following label: *Elatostemma* sp. Oengaran-Gebirge, altitude 1000 M. 1914, DvL. No. 18, not yet described. There were some ten specimens, both sexes being represented and at least one parasite.

Male. Length 1.25 m.M. Antennae as long as the body, sparsely haired, reddish brown, 14 segments, the 5th with a stem ¼ longer than the basal enlargement, which latter has a length about twice its diameter, terminal segment reduced, narrowly oval and with no apical stem. Palpi, first segment short, subquadrate, the second with a length about twice its diameter, the third one half longer than the second, more slender and the fourth twice the length of the second, more slender. Mesonotum reddish brown, scutellum and postscutellum yellowish, abdomen yellowish brown, halteres whitish transparent, coxae pale yellowish, legs mostly pale straw, claws long, slender, unidentate, the pulvilli about half the length of the claws. Genitalia, basal clasp segment moderately long, stout, terminal clasp segment long, stout, dorsal plate long, broad, very deeply and triangularly emarginate, the irregular broadly rounded lobes sparsely setose. Ventral plate shorter, deeply and almost roundly emarginate, the lobes rather slender, subtruncate.

Female. Length 1.5 m.M. Antennae extending to the base of the abdomen, sparsely haired, pale yellowish, 14 segments, the 5th sessile, cylindric, with a length 2½ times its diameter. Mesonotum reddish brown. Scutellum and postscutellum yellowish, abdomen brownish yellow. Wings hyaline, halteres whitish transparent, coxae and femora pale yellowish, tibiae and tarsi dark brown. Ovipositor when extended fully as long as the abdomen, the terminal lobes long, rather broad, with a length over three times the width.

Type Cecid. A 3095, N. Y. State Museum.

Stefaniella falcaria n. sp.

This peculiar form is referred with very little question to this genus, though it differs in some respects from the type species. It seems best for the present at least, to consider it as simply an extreme type of specialization rather than erect a new genus. A series of insects were reared from a globose or ovate leaf gall on *Avicennia officinalis* L., the larvae occurring here and there within the abnormal tissue and very frequently two adjacent leaves were affected. Apparently the same species was reared from another somewhat different gall on the same plant. The data on the label of the type lot is as follows: *Avicennia officinalis* L. Semarang 27/IV, '14, DvL. Marcellia IX, S. 40, No. 96. There was a considerable series of females, at least two males and several pupae in the lot.

The label on the other lot, with little question referable to this species, is as follows: *Avicennia officinalis* L. Semarang 29/IV, '14, DvL., Marcellia IX, S. 40, No. 97, Ganz bleiches Tier.

Male. Length 2 m.M. Antennae hardly extending to the base of the wings, yellowish brown, darker basally, 14 segments, the 3rd and 4th free, the 5th with a length ¼ greater than its diameter. Terminal segment slightly reduced. Palpi, first segment broadly oval, the second narrowly oval and much smaller, Mesonotum reddish brown, scutellum a little lighter, postscutellum yellowish, abdomen mostly yellowish brown, wings hyaline, apparently sparsely clothed with scales, the third vein uniting with costa at the distal fourth. Halteres whitish transparent. Coxae yellowish, legs mostly pale straw, claws long, stout, strongly curved, unidentate, the pulvilli nearly as long as the claws. Genitalia, basal clasp segment short, stout, terminal clasp segment swollen basally, moderately long, chitinized and distinctly pectinate apically. Dorsal plate apparently deeply and triangularly emarginate, the lobes rather broad and thickly setose. Ventral plate moderately long, broad, triangularly emarginate, harpes long, irregular.

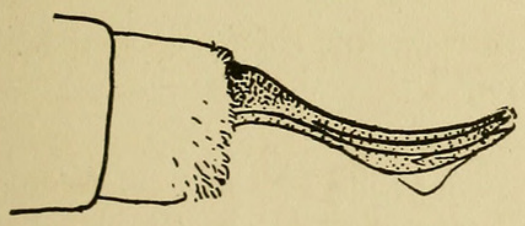

Fig. 1. Stefaniella falcaria, side view of the posterior extremity of the abdomen showing the extended falcate portion of the ovipositor.

Female. Length 2.5 m.M. Antennae hardly reaching to the base of the wings, yellowish brown, 14 segments, the 5th with a length ¾ greater than its diameter, the terminal segment subglobose, palpi biarticulate. Mesonotum and scutellum yellowish brown, postscutellum yellowish, abdomen yellowish orange, wings hyaline. Halteres pale yellowish. Coxae yellowish brown, legs mostly pale straw. Claws long, stout, strongly curved, unidentate, the pulvilli as long as the claws. Ovipositor about half the length of the abdomen, the distal portion stout, strongly chitinized and falcate.

Type. A 3089 N. Y. State Museum.

Stefaniella orientalis n. sp.

The one peculiar adult was reared from a petiole gall and bore the following data on the label:

Lepidagathis javanica Bl. Oengaran-Gebirge, altitude 1200 M. 18/IV, '12, DvL. It was also stated that the gall was underscribed.

The insect is tentatively referred to this genus because in the absence of the female it cannot well be placed elsewhere though the general appearance is quite distinct from *S. falcaria* decribed above.

Male. Length 2 m.M. Antennae extending to the base of the abdomen, rather thickly haired, yellowish brown, yellowish basally, 18 or 19 segments. The flagellate cylindric, with a thick whorl basally of long curved setae, the third and fourth free, the fifth with a length one half greater than its diameter, the terminal segment slightly produced, narrowly conical and with a length one half greater than its diameter. Palpi, first segment broadly oval, the second a little longer and narrowly oval. Mesonotum apparently yellowish, scutellum and postscutellum yellowish, abdomen dark brown, the basal segment whitish, the second and third broadly and the fourth to the sixth narrowly margined posteriorly with whitish, the 7th and 8th whitish. Wings hyaline, costa pale straw, the third vein uniting with the margin at the distal third. Coxae and femora yellowish, tibiae and tarsi pale straw. Claws long, rather stout, strongly curved, unidentate, the pulvilli nearly as long as the claws. Genitalia, basal clasp segment moderately long, stout, terminal clasp segment long, swollen basally, dorsal plate long, broad, broadly and triangularly emarginate, the lobes broadly triangular, sparsely setose apically, ventral plate short, broad, broadly rounded and sparsely setose apically.

Type Cecid. A 3098 N. Y. State Museum.

Lasioptera javanica.

1909, Kieffer, J. J. und Docters van Leeuwen-Reijnvaan, W. und J. Marcellia 8:123

Specimens referrable with very little question to this species were recorded as having been reared from a stem gall on *Melothria* species like that caused by the above named insect. The data on the label is as follows: *Melothria* sp., Oengaran-Gebirge, altitude 1400 M., 13/IV, '14, DvL.

This insect appears to be a typical *Lasioptera* except that the third and fourth antennal segments are not fused in the manner characteristic of long series of American species. The pupa appears to be unknown and it is therefore characterized in this connection.

Pupa (Female). Length 3.5 m.M., slender, antennae extending to the base of the wings, the dark brown wing cases to the third abdominal segment and the dark brown leg cases to the tip of the abdomen. Mesonotum reddish brown, abdomen dark brown, the segments posteriorly yellowish with submedian broadly rounded yellowish anterior extensions on the middle of the segment. Dorsum of abdomen minutely and uniformly dotted with chitinous points.

The larva is of the usual *Laisoptera* type being rather long, slender, broadly rounded at each extremity, the breastbone well developed, dark brown, bidentate, with a small median tooth and a distinct well chitinized shaft. Posterior extremity with sublateral, fleshy projections, possibly artifacts.

Lasioptera manilensis Felt.

1918, Felt, E. P., Phil. Journ. Sci. 13: 288-89.

1919, Uichanco, L. B., Phil. Journ. Sci. 14: 539.

One specimen referable with very little question to this species bore the following label: *Leea sambucina* Wlld., leaf gall, Semarang 21, IV, 1914, DvL. This species of *Lasioptera,* like *L. javanica,* is of a somewhat generalized type in that the third and fourth antennal segments are not coalescent.

Schizomyia laporteae n. sp.

This species was reared from a large tumid petiole or basal leaf gall on *Laportea stimulans* Miq. The gall is an irregular lobulate swelling with a length of 30 to 40 mm. and diameter of approximately 17 mm. It is figured and described in Marcellia 9:183, fig. 74. The specimen was labeled: *Laportea stimulans* Miq. Cec. No. 1. Marc. IX, 1910, S. 183, N. 180, Fig. 74. Oengaran Gebirge, Altitude 1400 M. 10/IV, 1914, DvL. The material consisted of one female, one pupa, four small parasites and one large parasite.

Female. Length 2.5 m.M. Antennae extending to the third abdominal segment, sparsely haired, yellowish brown, 14 segments, the 5th sessile, cylindric, with a length three times its diameter, and slight constrictions near the basal and distal thirds, circumfila moderately high, thick and characteristic; 12th segment with a length a little over twice its diameter, the 13th with a length ½ greater than its diameter, the 14th subglobose. Palpi, presumably quadriarticulate, apparently missing in the specimen. Mesonotum reddish brown, the submedian lines yellowish brown. Wings hyaline, apparently

sparsely scaled though mostly denuded in the specimen. Halteres pale yellowish fuscous subapically. Coxae and base of femora pale yellowish, legs mostly dark brown, the claws rather long, slender, simple, the pulvilli a little shorter than the claws. Ovipositor apparently a little over half the length of the abdomen, filliform, the tip minute, tapering to an acute apex and sparsely setose.

Type Cecid. A 3088, N. Y. State Museum.

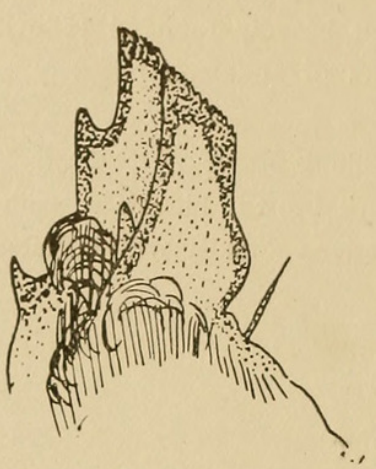

Fig. 2. Schizomyia laporteae, side view of the basal antennal horns of the male pupa

Pupa. Male. Length 2.25 m.M. Antennal cases extending to the base of the abdomen, the fuscous wing cases to the fourth abdominal segment, and the lighter leg cases to the tip of the abdomen. Antennal spines long, broad, the irregularly tapering distal margin minutely dentate. Basally there is a stout ventral spine and on the ventral aspect of the pupa, well separated from the antennal spines, there is a median stout curved spine. Thoracic spines long, slender and slightly and peculiarly curved. Dorsum of the abdominal segments with a series (three or four) transverse basal rows of short, stout spines.

The male genitalia of the nearly mature adult within the pupal exuvium has a short, stout, unidentate terminal clasp segment inserted subapically, the distal lobe of the basal clasp segment being long, narrowly triangular and thickly setose.

Schizomyia nodosa n. sp.

A number of these small, very interesting midges were reared. They are remarkable for the very symmetrical, high circumfila and the trinodose shape of the flagellate antennal segments of the male, a suggestion of the modification so apparent in the *Itonididinariae*. The lot bore the following label:

I, *Moschosma polystachum* Benth., Semarang, April 1914, DvL.

Male. Length 1.25 m.M. Antennae about as long as the body, sparsely haired, light brown, 14 segments, the fifth with stems about one fifth the length of the basal enlargement which latter has a length about four times its diameter and rather distinct constrictions at the basal third and just beyond the basal half, the former being most marked and each of the swellings with rather distinct heavy lateral circumfilar loops very suggestive of the short circumfila in certain male *Itonididinariae*. Terminal segment somewhat produced, with a distinct constriction at the basal third and a lighter one just beyond the basal half, the distal portion of the segment being distinctly smaller

and with numerous circumfilar loops. Palpi, first segment short, subquadrate, second narrowly oval, the third one half longer, more slender and the fourth longer than the third and more slender. Mesonotum reddish brown, scutellum yellowish, postscutellum reddish yellow, abdomen yellowish, wings hyaline, halteres whitish transparent, legs mostly pale straw. Claws long, slender, rather strongly curved, the pulvilli as long as the claws. Genitalia, basal clasp segment moderately long, stout, terminal clasp segment short, broad, the apical margin weakly chitinized. Dorsal plate short, broad, broadly and roundly emarginate, the lobes broadly rounded and sparsely setose. Ventral plate indistinct.

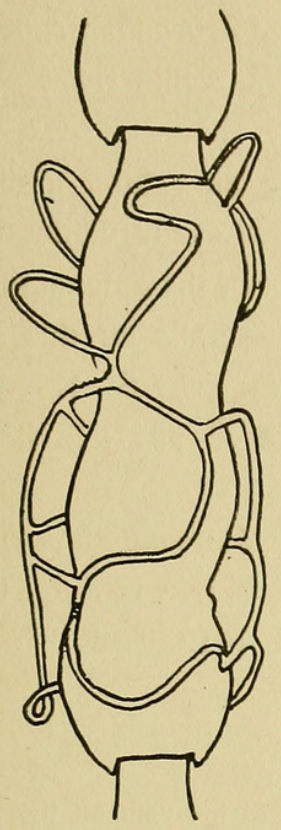

Fig. 3. Schizomyia nodosa, outline of the seventh antennal segment of the male showing its tronodose shape and the raised, somewhat symmetrical circumfila.

Female. Length 2 m.M. Antennae extending to the fourth abdominal segment, sparsely haired, light brown, 14 subsessile segments, the fifth with a stem about one seventh the length of the basal enlargement, which latter has a length four times its diameter, 13th segment with a length nearly one half greater than its diameter, the 14th with a length one fourth greater than its diameter. Palpi, first segment short, irregular, the second with a length at least three times its diameter, the third one half longer, more slender, the fourth one half longer than the third, more slender. Mesonotum reddish brown. Scutellum, postscutellum and abdomen yellowish, halteres whitish transparent, coxae yellowish, legs pale straw. Claws long, slender, slightly curved, the puvilli shorter than the claws. Ovipositor as long as the body, the terminal portion filiform.

Pupa Length 1.5 m.M. Antennal cases extending to the base of the abdomen, the antennal horns rudimentary, wing cases reaching to the third, the leg cases to the sixth abdominal segment. Thoracic horns long, moderately stout, curved apically, the dorsum of the abdominal segments with two or three transverse basal rows of moderately large chitinous spines.

Larva. Length 1.75 m.M. Moderately slender, yellowish orange, the breastbone bidentate, the lobes broadly rounded and the shaft rather slender. Skin coarsely shagreened.

Type Cecid. A 2099.

There was in this lot also one specimen of the somewhat similar appearing though very different, predaceous *Lestodiplosis*, the larvae doubtless praying upon those of the true gall makers.

Schizomyia villebrunneae n. sp.

A series of these very interesting midges were reared from several leaf galls, the label on the type lot reading as follows: 8, *Villebrunnea rubescens* Bl. Oengaran-Gebirge, altitude 1000 M. Cecid. No. 2, Marcellia Bd. X, 1911, S. 89, No. 247, 13/IV, '14 DvL.

This species is noteworthy in that the male antennae exhibit a distinct tendency toward trinodosity. The pupa of this species is easily distinguished from that of *S. laporteae* by the distinctly bidentate apex of the antennal horns.

Apparently the same insect was reared form other galls on this plant, the label on one reading as follows: 7, *Villebrunnea rubescens* Bl. Oengaran-Gebirge, altitude 1000 M. Cecid. No. 1, Marcellia Bd. X, 1911, S. 88, No. 246, Fig. 102, 13/IV, 1914, DvL.

A third lot referable to the same species had the following data on the label: 3, *Villebrunnea rubescens* Bl. Oengaran-Gebirge, altitude 1400 M. Cecid. No. 5, Bull. d. Jard. Bot. de Buitenzorg Série 2, No. III, 1912, S. 48, No. 341, 14/IV, '14 DvL.

Gall. The globose or ovate gall is narrowly attached to the vein on the underside of the leaf, the dimensions being 7-9 by 4-5 by 4 m.M. or even larger if the identification of the other lots is correct. Two types of galls are described and one figured in Marcellia 10: 88-89.

Male. Length 1.5 m.M. Antennae extending to the fourth abdominal segment, sparsely haired, yellowish brown, 14 subsessile segments, the fifth cylindric with a length about four times its diameter and with rather distinct constrictions near the basal and distal thirds, the circumfila heavy, strongly convolute and on most segments with distinctly elevated loops on the slight basal, middle and the distal enlargements. Terminal segment with a length about four times its diameter, slightly constricted near the basal and distal thirds, and with the apex rather thickly crowded with short, circumfilar loops. Palpi, first segment short, subquadrate, the second narrowly oval with a length over twice its width, the third one half longer, more slender and the fourth one half longer than the third. Mesonotum dark reddish brown, scutellum yellowish brown, postscu-

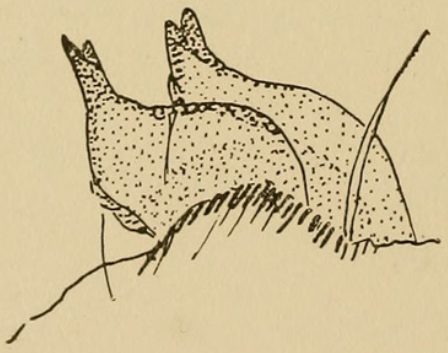

Fig. 4. Schizomyia villebrunneae, side view of the basal antennal horns of the male pupa.

tellum yellowish, abdomen pale yellowish brown, wings hyaline, halteres whitish transparent, coxae yellowish, legs mostly pale straw, claws rather long, slender, evenly curved, simple, the pulvilli distinctly shorter than the claws. Genitalia, basal clasp segment rather long, broad, and with a distinct broadly triangular setose appendage. Terminal clasp segment inserted subapically, short, stout, the distal margin roundly subtruncate, one angle strongly chitinized and minutely denticulate. Dorsal plate short, broad, broadly and triangularly emarginate, the short lobes sparsely setose; ventral plate short, broad, brodaly emarginate, the lobes narrowly and sparsely setose apically.

Pupa (Male). Length 1.5 m.M. Antennal cases extending to the base of the abdomen, the antennal horn narrowly triangular and strongly bidentate apically. Thoracic horns long, slender, slightly curved, acute apically. The fuscous wing cases extending to the fourh abdominal segment and the leg cases to the last abdominal segment. Mesonotum yellowish brown, abdomen yellowish, the segments dorsally with two or three transverse basal rows of short, stout, triangular spinès.

Larva. Length 1.5 m.M. Antennae yellowish orange, breastbone reddish brown, bidentate apically.

Type Cecid. A 3092 N. Y. State Museum.

Female. Length 2 m.M. Antennae extending to the second abdominal segment, sparsely haired, yellowish brown, 14 segments, the 5th cylindrical with a length about four times its diameter and moderately high, thick circumfila. Palpi, first segment short, subquadrate, the second one half longer, more slender, the third one half longer than the second, more slender, and the fourth one half longer than the third. Mesonotum dark reddish brown, scutellum and postscutellum reddish, abdomen brownish red, halteres yellowish transparent, coxae brownish red, legs mostly pale yellowish. Claws moderately long, stout, strongly curved, the pulvilli shorter than the claws. Ovipositor about as long as the abdomen, the distal portion filiform, the tip narrowly triangular and sparsely setose. Cecid. A. 3091.

The female is form the second lot mentioned above and the association with the type form, the male, is provisional.

Asphondylia callicarpae Felt.

1918, Felt, E. P., Phil. Journ. Sci. 13:285-86.

1919, Uichanco, L. B., Phil. Journ. Sci. 14:536-37.

This insect has been reared from a polythalamous midrib enlargement. Adults of what are with very little question this species bore the following

label: *Callicarpa longifolia* Lam., Oengaran-Gebirge, altitude 1400 M., April, 1914, DvL., No. 6. The material consists of but one female and two pupae and inasmuch as the female in the type lot had its characteristics partly obscured by the adherent anterior portion of the exuvium, a detailed description of this sex and also of the pupa, previously unknown, is given below.

Female. Length 2.25 m.M. Antennae nearly as long as the body, sparsely haired, light brown, 14 segments, the fifth cylindric, with a length nearly five times its diameter, the 13th segment with a length 2¼ times its diameter, the 14th subglobose. Palpi, first segment subquadrate, the second narrowly oval with a length over twice its width, the third about twice the length of the second, more slender. Mesonotum dark brown, the submedian lines yellowish, scutellum yellowish brown, postscutellum a little darker, abdomen reddish brown, halteres pale yellowish, coxae and femora pale yellowish, tibiae and tarsi dark straw. Claws long, moderately slender, strongly curved, the pulvilli a little shorter than the claws. Ovipositor when extended nearly as long as the body.

Pupa. Length 3 m.M. Rather slender, yellowish, the thoracic regions darker, antennal cases extending to the base of the abdomen and with a conspicuous triangular chitinous horn basally, the mesal margin minutely serrate. Wing cases extending to the third abdominal segment, the leg cases to the fifth. Abdomen rather coarsely shagreened, the basal three fourths of the second to the seventh segments dorsally with three or four somewhat irregular, transverse rows of stout chitinous spines, the posterior row the stoutest. Terminal segment with the extremity somewhat chitinized and an approximately triangular group of six stout spines posteriorly, with smaller spines basally.

Cecid. 3102 N. Y. State Museum.

Asphondylia leeae n. sp.

A number of adults and pupae were reared from a fruit gall (See Bull. Jard. Bot. Buitenzorg, 2d Ser. 15:36, 1914), the lot bearing the following label: „Die Mücken kommen gegen 6 Uhr mittags aus ihren Gallen. *Leea sambusina* Wlld. Beeren Galle Beitrag VII, No. 443, Buitenzorg 24/9, '18 DvL." This species is typical of the genus.

Male. Length 2.5 m.M. Antennae probably nearly as long as the body, sparsely haired, light brown, 14 segments, the fifth cylindric, with a length four times its diameter. Palpi, first segment short, second broadly oval, the third more than twice the length

of the second, moderately stout. Mesonotum dark brown, scutellum, postscutellum and abdomen yellowsh brown. Halteres whitish transparent, coxae and legs mostly pale straw. moderately stout, strongly curved, simple, the pulvilli as long as the claws. Genitalia, basal clasp segment long, stout, terminal clasp segment short, greatly swollen, bidentate.

Female. Length 3 m.M. Antennae nearly as long as the body, sparsely haired, light brown, 14 segments, the fifth cylindric, with a length 3½ times its diameter, the 13th with a length a little greater than its diameter, the 14th globose. Mesonotum dark brown, scutellum yellowish brown, abdomen yellowish brown, otherwise as in the male. Ovipositor nearly as long as the body, the distal portion aciculate, dorsal pouch well developed.

Pupa. Length 3 m.M. Head, mesonotum, and anterior portion of body fuscous, the abdomen yellowish to reddish brown, antennal horns long, stout, slightly curved, antennal cases extending to the base of the abdomen, the fuscous wing cases to the third abdominal segment and the dark leg cases to the fourth and fifth abdominal segments. The dorsum of the abdominal segments with one transverse row of long, stout chitinous spines near the middle and on the basal half an irregular row on the second to the 4th abdominal segments and a double row on the 5th, 6th and 7th. The terminal segment with the spines irregularly arranged.

Type Cecid. A 3097 N. Y. State Museum.

Asphondylia litseae n. sp.

Only one adult of this somewhat generalized species was reared. It was labeled as follows: *Litsea* spec., No. 2159, Oengaran-Gebirge, altitude 1400 M., 21/IV, 1914, DvL. There were in addition to the female two pupae. The heavy, relatively high circumfila suggestive of *Schizomyia* and the absence of the well developed dorsal pouch at the extremity of the abdomen raises a doubt as to the generic position of this species and lacking specimens of the male, the insect is tentatively placed in this genus.

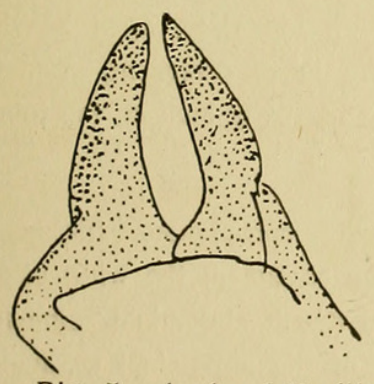

Fig. 5. Asphondylia litseae, dorsal view of the antennal horns of the female pupa.

Female. Length 2.5 m.M. Antennae extending to the fourth abdominal segment, sparsely haired, pale yellowish, 14 sessile segments, the fifth with a length 2½ times its diameter and with the relatively coarse, high circumfila of *Schizomyia* Terminal segment reduced, subglobose. Palpi, first segment subquadrate, second broadly oval, acute apically. Mesonotum reddish brown, the submedian lines yellowish, scutellum and postscutellum yellowish, abdomen brownish yellow. Wings subhyaline,

rather thickly clothed with fuscous scales, the third vein joining the margin a little beyond the apex of the wing. Halteres and coxae yellowish, legs pale straw, claws moderately long, stout, strongly curved, simple, the pulvilli about 2/3 the length of the claws. Ovipositor nearly as long as the body, the distal portion aciculate. Dorsal pouch apparently rudimentary.

Pupa. Length 2.5 m.M. Antennal horns unusually long, narrowly triangular, antennal cases extending to the base of the abdomen, the fuscous wing cases to the second and the dark brown leg cases to the fourth and fifth abdominal segments. Thoracic horns slender, strongly curved. Mesonotum reddish brown, fuscous on the apical margin, abdomen pale orange, with fuscous hairs, the dorsum of the abdominal segments with three or four transverse basal rows of rather small, weakly chitinized spines.

Type Cecid. A 3096, N. Y. State Museum.

Asphondylia strobilanthi n. sp.

The one male reared is characteristic of the genus. The insect produces an undescribed gall on the aerial roots of *Strobilanthus cernuus* Bl. The data on the label follows: *Strobilanthus cernuus* Bl. Tjibodas, altitude 1800 M., December, 1918, DvL. The material consists of one adult, one pupa, two larvae and also pupae of parasites.

Male. Length 3 m.M. Antennae probably as long as the body, sparsely haired, light brown, 14 segments, the fifth cylindric, with a length six times its diameter, rather thickly clothed with narrow, curved scales, the circumfila very convolute, rather high and somewhat heavy. Terminal segments missing. Palpi, the first segment short, irregular, the second broadly oval. Mesonotum reddish brown, scutellum yellowish, postcutellum yellowish brown, abdomen fuscous yellowish, wings hyaline, halteres whitish transparent, coxae fuscous yellowish, legs mostly pale straw. Claws long, moderately stout, strongly curved, the pulvilli a little shorter than the claws. Genitalia, basal clasp segment short, stout, terminal clasp segment short, moderately stout, bidentate, apex heavily chitinized, dorsal plate deeply and triangularly incised, the lobes divergent, roundly triangular and thickly setose. Ventral plate short, deeply and narrowly incised, the lobes roundly triangular and sparsely setose.

Pupa (Female). Length 5 m.M. Antennae with conspicuous triangular basal horns, the antennal cases extending to the base of the abdomen, the wing cases to the second abdominal segment and the leg cases to the fourth abdominal segment. The thorax dark, abdomen fuscous yellowish, the dorsum of the abdominal segments with a broad, transverse band of irregularly placed short, stout chitinous spines, covering most of the basal three fourths of each segment.

Larva. Length 2.5 m.M. Moderately stout, yellowish orange, the breastbone short, very broad, the long, narrowly triangular lateral teeth separated by a distance greater than their length. Shaft obsolescent. Skin coarsely shagreened. Posterior extremity broadly and irregularly rounded.

Type Cecid. A 3100 N. Y. State Museum.

Procontarinia matteiana Kieff. & Cec.

1906, Kieffer, J. J. and Cecconi, G., Marcellia 5:135-36.

A number of midges and some parasites, all rather badly broken, are referable with very little question to this species. The data on the label is as follows: *Mangifera indica* L. Semarang, May, 1914, DvL., Bull. Jard. Bot. Buitenzorg, Sér. 2, XV, Gall. No. 461, Fig. 214. There is a brief description of the gall and an illustration of its structural details in this latter publication.