

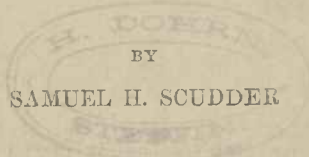
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ENTOMOLOGICAL NOTES



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REMARKS ON SOME REMAINS OF INSECTS OCCURRING IN CARBONIFEROUS SHALE AT CAPE BRETON.

They were all found upon a single small fragment of stone, and consist of wings of cockroaches (not very uncommon in carboniferous strata) and the well preserved remains of the abdomen of a larval dragon-fly.

Heretofore the earliest indubitable remains of dragon-flies have come from the Lias, several fragments of wings, as well as perfect wings, a head and part of an abdomen having been figured by Rev. Mr. Brodie in his work on the fossil insects of the secondary rocks of England. Goldenberg, however, figures¹ an obscure insect (of which he only says it is possibly a *Termes*, but to which, in a subsequent work he gives the name *Termes Hagenii*), which also is perhaps the larva of a dragon-fly; this was found in the carboniferous beds of the neighborhood of Saarbrücken in the valley of the Rhine. Further I exhibited to this Society some years ago, from the Carboniferous of Cape Breton, a photograph of a curious insect's wing, which I called *Haplophlebium Barnesii*, and which had the general aspect of a dragon-fly's wing, but differed from it in several essential features; it is not impossible that the body now exhibited may prove

¹ Dunker and Meyer's Palæontogr., IV, pl. vi, fig. 8.

the larva of that very insect, so much does it differ from the ordinary type of dragon-fly larvæ. The wing of *Haplophlebium* came from Little Glace Bay, Cape Breton, and was found by Mr. James Barnes. The abdomen now under consideration comes from Cossett's Pit, Sidney, Cape Breton, and from near the horizon of the Millstone Grit, as I am informed by Principal Dawson, to whom I owe the opportunity of studying this interesting fossil. The specimen was found by Mr. A. J. Hill. In both instances the insects are accompanied by fronds of *Alethopteris*, but of distinct species.

NOTICE OF A SMALL COLLECTION OF BUTTERFLIES MADE BY
MR. ROLAND THAXTER, ON CAPE BRETON ISLAND.

The species are but fourteen in number, and were all taken on Cape Breton Island. The two *Urbicolæ* and *Eurymus Philodice* were also taken at Shediac. The species are the following:—

<i>Basilarchia Arthemis.</i>	<i>Chrysophanus Epixanthe.</i>
<i>Aglais Milberti.</i>	<i>Heodes americana.</i>
<i>Argynnis Cybele.</i>	<i>Eurymus Philodice.</i>
<i>Argynnis Atlantis.</i>	<i>Pieris rapæ.</i>
<i>Brenthis Myrina.</i>	<i>Pieris oleracea.</i>
<i>Phyciodes Tharos.</i>	<i>Limochores Taumas.</i>
<i>Rusticus Scudderii.</i>	<i>Polites Peckius.</i>

The following are the only ones worthy of special notice:

Argynnis Cybele. A single specimen was taken, whose fore-wing measures 37 mm. in length. It has the unmistakable markings of *A. Cybele*, which has never before been taken so far north.

Rusticus Scudderii. Two males and two females were taken. The males do not differ from the usual form, except in having the

markings of the under surface rather heavier. But the two females are undersized, measuring but 21 m.m. in expanse; one of them has but few, and the other no, blue scales on the disk above; neither of them has a trace of any orange spots upon the outer border of the hind wings above, and very little, or no tinge of orange upon the outer border of the fore wings beneath. In all these respects, specimens from the southern coast of Labrador agree better with those from Canada and New York than with those from Cape Breton.

Chrysophanus Epixanthe. Whether *Dorcas* is distinct or not, I do not now venture to assert, but the specimens from Cape Breton belong to *Epixanthe*, and not, as we should expect, to the *Dorcas* type.

Eurymus Philodice. The most interesting insect brought home by Mr. Thaxter is unquestionably our common *E. Philodice*. The males hardly differ at all from the normal type, as found in New England, excepting in possessing a less conspicuous spot at the extremity of the cell in the fore wings above, although there, as here, it varies to a considerable extent. In both sexes it is usually a very pale orange transverse spot, edged narrowly with dusky scales. The female, too, is dimorphic in both places, but whetlier yellow or pallid, Cape Breton specimens invariably show a uniform and considerable departure from the normal type. New England individuals have a very broad, dark border to the upper surface of the fore wings, extending down to the inner border, almost or quite as conspicuously as in the male, although not extending along this border toward the base; this marginal band encloses a curving submarginal series of ill-defined yellow (or pallid) spots; it is only occasionally so narrow that the spots are situated at its very edge; so, too, there is a marginal band upon the hind wings, like that of the males, though narrower, often broken, and with an ill-defined interior edge; this, however, is occasionally reduced to a few scattered grimy scales between the upper subcostal and middle median nervules, very much as appears in the female of *Eurymus Pelidne*, when they are present at all. Now in the females before me, from Cape Breton, the marginal band of the hind wing is either totally absent, or is reduced to a few scales clustered about the extremity of the subcostal nervules, and is, in only a single instance, continuous along the border between these nervules; while the border of the fore wing, broad indeed next the costal margin, narrows rapidly, and terminates usually at the lower median nervule, or, if it reaches to the submedian nervure, it

is only by a few scattered grimy scales in the intervening interspace; the row of submarginal yellow (or pallid) spots would seldom be noticed, at least below the subcostal interspaces, but for a comparison with the normal type, or its continuance in the broader part of the band above. This is precisely what we find in *Eurymus Pelidne*, and so far as the upper surface of the pallid female is concerned, this species could scarcely be distinguished from the monomorphic *E. Pelidne*. The under surface of the Cape Breton insect, however, is dotted but lightly with griseous, and can be compared only to that of the true *E. Philodice*; although the submarginal spots of the hind wings, which are usually very conspicuous in New England specimens, never occur along the outer border in either sex of the Cape Breton type. The dimorphic pallid female, then, of the Cape Breton form of *Eurymus Philodice* approaches more closely the uniformly pallid female of the Labradorian *E. Pelidne*, than it does the normal dimorphic pallid female of its own species from New England. The gynandromorphic female of *E. Philodice*, whether of Cape Breton or of New England, finds, however, no parallel in Labrador, and the Cape Breton male agrees only with the *Philodice*-type. It should be added in this connection that the butterfly collected by Prof. Hamlin at Waterville, Me., on the strength of which I have once or twice in my list referred *Eurymus Pelidne* to northern New England, is nothing but the pallid female of this Cape Breton type, to which I would give the varietal name *laurentina*. Thirty-nine specimens were collected, of which ten were gynandromorphic females, eight pallid females, and the rest males.

Limochores Taumas. Specimens from this region, as shown both by Mr. Thaxter's collections, and others sent me several years ago by Mr. J. M. Jones, of Halifax, are remarkable for their smaller size, and the almost total absence of dull fulvous dusting upon the under surface of the hind wings, the upper and under surface being almost precisely alike in general tint.

A CENTURY OF ORTHOPTERA. DECADE V.—FORFICULARIÆ
(EXOTIC).

41. *Cylindrogaster nigra*. Head black, minutely punctate, somewhat tumid, thinly covered posteriorly with short castaneous bristles; in front, opposite the upper base of the antennæ, a pair of tau-shaped smooth sulcations, their convexities inward, approaching nearest each other above, and between them, and a little above, a slightly transverse impression; mouth-parts reddish fuscous; antennæ dark reddish brown, the basal joint blackish. Prothorax and mesothorax black, punctate, covered, especially next the borders, with recumbent castaneous bristly hairs; the prothorax with a slight median impression on its anterior half, and on either side two short similar longitudinal impressions from the front edge backward. Femora blackish, the distal extremity and the extreme base of tibiæ luteous; rest of legs castaneous, darkest in middle of tibiæ. Abdomen black, covered beneath profusely, above scantily, with castaneous hairs, golden in a certain light; last segment angularly produced a little above the base of each of the forceps; these are short, conical, curved inward throughout, rather sharply pointed, unarmed. Length of body, excl. forceps, 11 mm.; length of forceps, 18 mm. Described from a single female from Para.

Neither Stål nor Dohrn, the only writers who have treated of the species of this genus, appear to have seen the female. In the one above described, and another which I refer with some doubt to *C.*

gracilis Stål, the structure of the abdomen is very different from that of the male. The ultimate, penultimate, and to some extent the antepenultimate dorsal segments are extremely short; and the forceps also being short, it has the appearance of being partially withdrawn within the body; the extremity of the abdomen is thus suddenly, bluntly rounded, and the last segment, instead of being conspicuous, as in the male, is scarcely visible at all above; beneath it is rather shorter than the others, its extremity broadly and regularly convex. As the tegmina and wings of both the females are wanting they may be immature, but they are otherwise so perfectly formed, and the metathorax resembles so closely that of the wingless genera, that I take them for perfectly developed insects, and conclude that the females of this genus are apterous.

42. *Labidura auditor.* This species differs from *L. riparia* principally in the character of the forceps. In the male these are more strongly and regularly arcuate than in *L. riparia*, not in the least curved upward, but lying in a horizontal plane, the middle tooth small, and scarcely affecting the curve of the interior edge of the forceps. In the female they curve downward rather than upward, and curve inward toward the tip more strongly than usual in *L. riparia*. The wings in both sexes are altogether wanting. In size, color, markings and sculpture, it altogether resembles *L. riparia*. 1 ♂, 1 ♀. Natal.

43. *Chelisoches comprimens.* Head piceous, smooth, the middle of the front a little tumid; mouth-parts dark reddish brown; basal joint of antennæ blackish, joints two to thirteen gradually growing paler, the three following pale yellow, and the remaining (eight or more) pale brownish fuscous. Prothorax blackish castaneous, the sides slightly marginate, a distinct sharp median sulcation and a dull semicircular sulcation uniting the front outer angles. Tegmina and exposed part of wings dark castaneous, the latter less than half as long as the former, together twice as long as the prothorax; tegmina docked with a sinuous curve, much as in *C. morio* (Fabr.). Legs dark castaneous, the tarsi luteous. Abdomen dark castaneous, profusely punctate, the posterior edges of the segments indistinctly beaded; lateral plications of second and third segments more distinct than in *C. morio*, and the whole abdomen not so slender as in that species. Forceps almost precisely as in *C. morio*, rather longer, and of the color of the abdomen. Length of body, 12 mm.;

of antennæ, 13 mm.; of tegmina and wings, 5.75 mm.; of hind femora, 3.3 mm.; of forceps, 5.75 mm. 1 ♀. Africa.

I propose the above generic name (derived from *χρήση ὀχέω*) as a substitute for *Lobophora* Serv., which is preoccupied in Lepidoptera (Curtis, 1825). *Forficula morio* Fabr. is the type.

44. *Ancistrogaster arthritica*. Head, antennæ, thorax, tegmina, wings and legs, covered uniformly and sparsely with short, fine erect hairs. Head and pronotum shining blackish brown, the head with a reddish tinge; antennæ very dark chestnut brown, the mouth parts a little lighter; between the base of the antennæ the front has a pair of triangular, rather deep impressions. Pronotum slightly longer than broad, the sides parallel, the posterior angles distinct, the hind border gently convex; there is a distinct median impression half as long as the pronotum, a little in advance of the middle. Tegmina and wings very dark chocolate brown, the latter with a small luteous spot almost concealed by the tegmina; tip of the tegmina squarely docked. Femora dark brown, the rest of the legs dirty luteous, the tarsi slightly paler. Abdomen dark testaceous above, dark castaneous below, darkest at the sides, on both surfaces profusely and uniformly punctulate; the abdomen broadens in the middle, and besides, the edges of the fourth to the sixth segments expand into lateral depressed teeth of considerable size, curved backward and shaped somewhat as in *A. luctuosa* Stål. They are first directed outward and a little backward, the hinder two with their anterior edges slightly and roundly excised, but otherwise suffering but little diminution in width; and then they bend suddenly backward and taper to a point, each with a greater or less angulation at the bend, most marked in the hinder two; the outer portion of the upper is nearly twice as long as that of the lower, and hence slenderer, and the middle one stands midway in character between the other two. The forceps have the general shape of those of *A. luctuosa*; the basal tooth, in the same place, is very slight and blunt, and is followed posteriorly by two or three granulations; the apex, which is finely pointed, is armed a little before the tip by a slightly recurved small triangular lamellate tooth, before which the edge is sparsely, beyond which it is densely pilose. Length of body, 10 mm.; of tegmina and wings, 5 mm.; of hind femora, 3.5 mm.; of front lateral abdominal tooth, 1.5 mm.; of forceps, 4.75 mm. 1 ♂. Brazil.

45. *Forficula variana*. Head and pronotum luteo-castaneous, the sides of the latter paler. Head smooth, with an oblique, broad,

and rather shallow straight sulcation, extending from the middle of the inner side of the eye backward and inward, nearly following the suture; mouth parts dirty luteous, the palpi darker at base; antennæ 13-jointed, brownish luteous, slightly dusker at the tips of the joints, very minutely pilose. Pronotum smooth, a little depressed in the middle, especially at the sides, with a slight median impressed line; it is a little longer than broad, with the sides very nearly parallel, but diverging slightly; posterior edge a little convex, the posterior angles pretty distinct. Tegmina nearly twice as long as the pronotum, squarely docked at the apex, smooth, brownish fuscous on the inner, pale luteous on the outer half; closed wings extending beyond the tegmina by a distance nearly equal to the width of the pronotum, luteous, the inner edge blackish fuscous, more broadly in front than behind. Legs luteous, the tarsi paler, the femora tinged with castaneous. Abdomen piceous, the last joint or two dark castaneous, the whole sparsely punctate. Pygidium squarely and smoothly docked at the tip. Forceps luteous at base, blackish in the middle, dark castaneous at the tip. They are rather simple, flattened cylindrical, directed toward each other at the extreme base so as to become attingent, beyond straight, curving inward at the pointed tip; within they have a basal triangular expansion, beyond which the inner edge is straight to the curved tip, and finely crenulato-denticulate. Length of body, 8.75 mm.; of antennæ, 6 mm.; of tegmina and wings, 3.25 mm.; of hind femora, 2 mm.; of forceps, 2.75 mm. 1 ♀. Liberia.

46. Forficula vellicans. Head luteo-castaneous, smooth, slightly tumid; labrum dusky; palpi dull luteous; antennæ dark brown at base, growing paler beyond, 12-jointed, sparsely pilose. Pronotum quadrate, longer than broad, luteo-castaneous, uniformly and slightly tumid, the sides parallel, a little marginate, the middle with a faintly impressed longitudinal line, the hind margin slightly convex, all the angles square. Tegmina about half as long as the pronotum, squarely docked at the extremity, smooth, dull luteous, the inner edge sometimes a little dusky; wings wanting. Legs luteous; the femora, especially the hind femora, a little infuscated. Abdomen rather dark castaneous, profusely and rather finely punctate throughout, above and below; pygidium small, squarely docked, minutely trifid. Forceps simple, about two-thirds as long as the abdomen, flattened cylindrico-conical, attingent, nearly straight, but a little upcurved, the pointed tips incurved; inner edge slightly

rugulose. Length of body, 11.75 mm.; of antennæ, 8.5 mm.; of tegmina, 2.75 mm.; of hind femora, 3.25 mm., of forceps, 4 mm. 2 ♀. Brazil.

47. *Forficula luteipes*. Dark castaneous, smooth, slightly tumid; palpi luteo-fuscous, the tips dusky; antennæ (broken) very dark fuscous brown at base, paler brown beyond, sparsely pilose. Pronotum quadrate, scarcely longer than broad, dark castaneous, slightly tumid, the sides straight, flattened, scarcely margined, much lighter colored than the middle, a very faintly impressed median line; the posterior border gently convex. Tegmina fully half as long again as pronotum, dull luteous, broadly margined interiorly with fuscous, the tip squarely docked; wings projecting but little beyond the tegmina, the projecting portion about half as long as the pronotum, colored like the tegmina. Legs uniform luteous. Abdomen very dark castaneous, not punctate, but transversely wrinkled with exceedingly fine short wavy lines, occasionally reduced to punctæ. Pygidium small, trifid, the middle tooth larger than the others. Forceps simple, scarcely more than half as long as the abdomen, slightly depressed, cylindrico-conical, attingent, nearly straight, but scarcely upcurved; the pointed tips incurved, the inner edge minutely denticulate. Length of body, 10.25 mm.; of tegmina and wings, 3.25 mm.; of hind femora, 2.5 mm.; of forceps, 3 mm. 2 ♀. Brazil.

This species is closely allied to *F. vellicans* Scudd., differing from it principally in the presence of wings, the non-punctate abdomen and the shorter forceps.

48. *Forficula variicornis*. Head black, with a reddish tinge, with a pair of puckered impressions dividing pretty equally the space between the upper bases of the antennæ; palpi brownish luteous; antennæ 10-11 jointed, the basal three or four joints brownish luteous, the penultimate joint pale luteous, all the others dark brown, verging toward black, all sparsely pilose. Pronotum quadrate, scarcely longer than broad, equal, the sides straight, the hind border gently convex; the middle of the anterior half a little tumid, with an impressed median line, which beyond the intumescence changes to a slight carina; blackish brown, the sides broadly, and the hind border narrowly dull luteous. Tegmina about twice as long as the pronotum, of a rich dark brown, the tip squarely docked. Projecting part of wings of same color, tipped interiorly and minutely with luteous, extending beyond the tegmina to a distance nearly

equal to the width of the pronotum. Legs dull luteous, more or less obscured with fuscous, especially just before the tip of the femora. Abdomen very dark mahogany brown, the lateral plications of second and third segments very prominent, forming blunt conical tubercles; surface of abdomen nearly smooth; last dorsal segment in both sexes with a minute circular central depression. Forceps of male nearly three-quarters as long as the abdomen, flattened beneath, directed at first, for a short distance, horizontally and slightly outward, then, at a superior constriction, bent slightly upward and slightly inward to the incurved tip, which by a sudden constriction at its base resembles a claw; the lower inner edge of the upturned portion is distantly and very delicately denticulate, and the middle of the upper surface bears a large, laminate, compressed, triangular pointed tooth; forceps of female simple, slender, approximated at the base, and beyond attingent and straight to the finely pointed incurved tip; they are nearly horizontal but regularly curved, first downward and then upward, minutely denticulate along inner edge. Length of body, 9 mm.; of antennæ, 7 mm.; of wings and tegmina, 3.5 mm.; of hind femora, 2.5 mm.; of forceps, 3.5 mm. 3 ♂, 4 ♀. Brazil.

49. Forficula hirsuta. Head dark mahogany brown, the front tumid, with a pair of short longitudinal furrows dividing the space between the antennæ; palpi dull luteous; antennæ (broken beyond fifth joint) uniformly dark mahogany brown. Pronotum as in *F. variicornis*, but uniformly reddish black, the sides slightly elevated. Tegmina dark reddish brown, twice as long as the pronotum, squarely docked at tip; wings of same color, scarcely tipped with dirty luteous. Femora uniform dark reddish brown; rest of legs dull luteous. Abdomen dark reddish brown, the posterior edges of the segments blackish, the lateral plications of the second and third segments prominent, the surface profusely, minutely and transversely punctato-striate with abbreviated striæ, the last segment with a short median longitudinal impression. Head, antennæ, prothorax, base and lower edge of tegmina, exposed part of wings, legs and abdomen rather sparsely covered with moderately long pile. Forceps nearly as long as the abdomen, very slender, cylindrical, approximated at base, beyond attingent, straight to the incurved pointed tip. Length of body, 9.75 mm.; of tegmina and wings, 4.5 mm.; of hind femora, 2.9 mm.; of forceps, 4 mm. 1 ♀. Brazil.

This species is closely allied to *F. variicornis* Scudd., differing

from it principally in the uniform and dark coloring of the antennæ and femora, the hirsuteness of the whole body, the punctate abdomen and the slender forceps.

50. *Labia arcuata*. Head black, slightly tumid, very minutely rugulose, covered with very short pile, palpi dark brown; antennæ with eleven joints, pilose, blackish brown, the terminal half of the apical joint pale. Pronotum black, the sides scarcely tinged with testaceous, quadrate, scarcely longer than broad, scarcely narrowing posteriorly, the sides straight, the posterior angle well marked, hind edge gently convex; the front half slightly tumid, with a median impressed line, the rest flat. Tegmina glistening black, covered with short pile, more than twice as long as the pronotum, each as broad as the pronotum, the apex roundly excised; exposed part of wings slender, almost pointed, black, nearly as long as the pronotum. Legs dark brown, the apical half of tibiæ and tarsi growing lighter. Abdomen dark mahogany brown above, blackish at the sides, castaneous below, covered wholly with short pile. Pygidium very broad, bifid, with large teeth. Forceps about a third as long as the abdomen, strongly arcuate, trigono-arcuate on basal, straighter half; beyond flattened cylindrical, bent inward, nearly straight, and the apex pointed and not incurved; the inner surface is nearly flat, with an upper and lower edge; the upper edge is smooth, with a minute tooth near the base; the lower edge has a larger triangular laminate tooth slightly further from the base, and directed a little downward. Length of body, 6.4 mm.; of antennæ, 4.1 mm.; of tegmina and wings, 3 mm.; of hind femora, 1.3 mm.; of forceps, 1.6 mm. 1 ♂. Vassouras, one hundred miles north of Rio, Brazil, taken March 5. (B. P. Mann.)

A CENTURY OF ORTHOPTERA. DECADE VI. — FORFICULARIÆ
(N. AMERICAN).

51. *Neolobophora volsella*. Head smooth, glistening, vinous red, the eyes piceous, and the front strongly obscured with blackish, sutures of the head deeply impressed, and either hemisphere of the occiput intumescent; antennæ blackish fuscous, gradually growing a little paler toward the tip, the basal joint often tinged with reddish; thorax and abdomen piceous, the sides of the prothorax dull luteous. Prothorax smooth, with very delicate and faint infrequent transverse furrows, and a very slight median sulcation.

Tegmina slightly longer than broad, the hinder edge cut obliquely in a gentle curve, so that when at rest the combined hinder edges form a slight concave curve. Wings wanting. Legs luteous, the apical half of the fore and middle femora and the apical third of the hind femora black, or blackish fuscous. Abdomen very distantly and very minutely punctulate, each pit giving rise to a minute short hair. Forceps long and very slender, those of the female nearly as long as the abdomen, attingent, subquadrate, straight until close to the tip and then curved slightly inward, unarmed, vinous red, slightly obscured at the tip; those of the male nearly twice as long as the abdomen, the basal half subquadrate, very slightly bowed in opposite directions, the inner edges delicately toothed or granulate, with a slight but distinct tooth in the middle, beyond which the arms of the forceps are subcylindrical, subattingent, and have the curve of the female; the basal half is mostly vinous red, more or less obscured, especially toward the tip, the apical half blackish. Length of body excluding forceps, 12-13 mm.; of antennæ, 8.5 mm.; of tegmina, 2.5 mm.; of hind femora, 3.5 mm.; of forceps, ♂, 10.5 mm., ♀, 5.25 mm. Described from 4 ♂, 3 ♀, taken by Sumichrast (No. 6) in the mountains about Orizaba, Mexico, under bark in the month of January. Smithsonian Institution.

In describing this genus I stated that the terminal segment of the abdomen was alike in both sexes; this is not strictly true, that of the female narrowing much more rapidly than that of the male. I also compared it with the old world *Lobophora*, but failed at the time, for want of proper material, to see its much closer affinity to *Nannopygia*.

52. *Thermastris Chontalia*. Head black, the mouth parts luteo-fuscous, obscured with blackish. Antennæ with more than thirty-four joints, the first and third joints stouter and shorter than in *T. brasiliensis*, the first twelve and thirteen joints blackish fuscous, beyond growing paler fuscous. Prothorax and tegmina blackish brown, with very distant, short, stout, tapering hairs; pronotum nearly flat, with a very obscure median longitudinal depression; tegmina sinuously and obliquely docked at tip, twice as long as the prothorax; the projecting portion of the wings, as in the other species of the genus, is covered with hairs like those on the tegmina, and squarely docked at extreme tip, but unlike the other species is of the same color as the tegmina, with very slightly paler inner edge. Legs dirty yellowish brown, the femora covered sparsely with spinous hairs, the tibiæ and tarsi blackish above. Abdomen dull castaneous, rugulose, the last

dorsal segment with a broad median depression, and the hinder edge scarcely produced angularly over each of the arms of the forceps. Forceps flattened triquetral, moderately stout, as long as the tegmina, straight nearly to the tip, then rather sharply incurved to a bluntly pointed tip; inner double edge irregularly but rather frequently toothed, larger at base than beyond, but furnished with a not very conspicuous broad triangular laminate tooth just beyond the middle. Length of body, 18.5 mm.; of antennæ, 15 mm.; of tegmina and folded wings, 7.75 mm.; of hind femora, 4 mm.; of forceps, 6.25 mm. 1 ♀. Chontales, Nicaragua.

This species differs distinctly from *T. brasiliensis* and *T. Saussurei* in having longer forceps and nearly uniformly dark wings, of the color of the tegmina.

53. *Spongophora forfex.* Dark castaneous brown, the mouth parts scarcely paler, the antennæ castaneous, becoming infuscated beyond the base. Legs luteo-castaneous, the front of the femora blackish fuscous; exposed part of wings pale mahogany brown; tip of the tegmina obliquely docked, slightly and roundly excised, and next the inner edge strongly produced; posterior edge of the abdominal segments with a series of closely crowded minute notches; terminal segment rugulose, with granulations, which are absent from the two stripes down the middle, grow larger and more abundant posteriorly, and bead the posterior edge. Forceps reddish, nearly as long as the body, depressed cylindrical, very slender, nearly straight, slightly incurved on the basal half, beyond straight and then incurved at the tip, the extremity of which is pointed; the inner edge is slightly rugulose, and just before the middle has a slight tooth. Length of body, 22 mm.; of tegmina and wings, 9.5 mm.; of hind femora, 4.25 mm.; of forceps, 19 mm. 1 ♂ from the collection of Dr. Schaum; the locality is unknown, but is doubtless some part of tropical or subtropical America. It belongs to the group of *S. parallela* (Westw.) and *S. prolixa* (*Psalid. parallela* Dohrn nec Westw.), but differs from them in coloration, and in the structure of the forceps.

54. *Ancistrogaster gulosa.* Head very dark castaneous brown with very thin short pile on the occiput; antennæ 12-jointed, pale brown, the basal joint darker; palpi pale brown. Pronotum dark brown, the sides dull luteous, slightly broader than long (♂), or of equal length and breadth (♀), the sides slightly convex, slightly narrowing posteriorly, the posterior margin well rounded; broadly depressed just behind the centre with a faintly impressed median line

and two short longitudinal lines on either side in front; covered throughout with thin pile, as also are the tegmina and wings; tegmina uniform dark brown, squarely docked at the tip, about twice as long as the pronotum, the wings dull luteous. Femora rather light brown, covered sparsely with short pile, the tip paler; tibiæ dirty luteous, tarsi pale yellowish. Abdomen dark brown, finely and sparsely punctulate, the punctulations giving rise to short, fine golden hairs, which also cover the forceps; sides of the fourth and fifth abdominal segments produced posteriorly to sharp angles, but inconspicuous; the abdomen itself broadens and thickens regularly on the first three or four segments, and then narrows more rapidly, and the sides of the last segment are parallel. Forceps of female straight, simple, attingent, curving inward at tip and pointed, unarmed excepting a slight denticulation on the inner edge. Those of the male resemble in their general direction those of *A. arthritica* Scudd., but are more strongly bent near the base; at the extreme base the inner edge bears a prominent, rather stout pointed triangular tooth, and the lower inner edge beyond it is rudely denticulate; the forceps are not depressed as in *A. arthritica*, but trigono-cylindrical, the inner surface flat; but at the tip, which does not diminish in size, they become flattened, and terminate in a nearly straight edge, those of the opposite arms meeting; either end of the blade developing a pointed tooth, the preapical one small and bifid, the apical rather long and incurved. Length of body, 10.5–13 mm; of antennæ, 11 mm.; of tegmina and wings, 4.5 mm.; of hind femora, 4 mm.; of forceps, ♂, 4.5 mm., ♀, 3.1 mm. Described from 5 ♂, 1 ♀, taken by Sumichrast (No. 4) in Puebla, Mexico (terra frigida) in January. Smithsonian Institution.

55. Forficula vara. Head dark mahogany brown, palpi and antennæ dark luteous, the latter 11–12 jointed; head smooth, full, devoid of impressions. Pronotum subquadrate, scarcely as long as broad, dark reddish brown, the sides lutescent, the front border straight, the sides straight and parallel, the posterior angles broadly rounded; the surface smooth, with a scarcely apparent median sulcation. Tegmina dark brown with a reddish tinge, a little longer than the pronotum, docked with a slight obliquity; wings wanting. Legs luteous, the outer edge of the tibiæ dusky. Abdomen dark mahogany brown, stout and plump, very slightly larger in the middle than at either extremity in the male, enlarging slightly to the fifth dorsal segment, and then suddenly tapering in the female; surface nearly

smooth beneath, thinly pilose; last dorsal segment squarely docked in the ♂, the forceps strongly bowed and widely distant; at base these are flattened, directed outward and upward; then, a little before the end of the basal third, they are turned inward and curve downward and again upward, becoming flattened trigonate, and tapering to a blunt point; the inner edge is rather rudely but minutely denticulate near the base, beyond more or less crenulate; the forceps of the ♀ are simple cylindrico-trigonate, attingent, straight, slightly incurved next the pointed tip, minutely denticulate along the inner edge. Length of body, ♂, 8-9.75 mm., ♀, 7-8 mm.; of antennæ, 6 mm.; of tegmina, 1.5-2 mm.; of hind femora, 2.1-2.8 mm.; of forceps, ♂, 2.9-3.4 mm.; ♀, 2-2.6 mm. Described from 9 ♂, 8 ♀, collected by Sumichrast (No. 2) at Puebla, Mexico (*terra frigida*), in January. Smithsonian Institution.

This species approaches more closely to the European *Forf. bipunctata* Fabr. than any known to me, but it still preserves the characteristic features of the true *Forficulæ* and not of the genus *Anechura*, which I shall propose in another paper for the European species mentioned.

56. *Forficula tolteca*. Head dull castaneous, smooth, but sparsely pilose, slightly tumid, with a transverse brace-shaped slight sulcation between the antennæ; palpi dirty luteous; antennæ with the basal joint dirty luteous, beyond light brown, the tenth pale, excepting at the extremities (beyond broken). Pronotum rufoluteous, dull luteous at the sides, scarcely broader than long, well rounded posteriorly, with a slightly impressed median line on the anterior, and a slight carina on the posterior half, the whole flat, sparsely pilose. Tegmina dark brown, twice as long as the pronotum, squarely docked at the extremity, sparsely pilose; the exposed part of the wings dull luteous, more or less infuscated on the borders, sparsely pilose, as long as the pronotum. Legs luteous, sparsely pilose, the femora slightly and broadly fuscous toward the tip, the tibiae still less so toward the base. Abdomen rather short and full, with convex sides, dark castaneous, more or less blackish toward the sides, very delicately and transversely striate, more or less pilose, the lateral tubercles rather prominent. Forceps more than half as long as the abdomen, depressed cylindrical, simple, straight, attingent, incurved at the tip, and very sharply pointed, sparsely pilose throughout, the inner edge very finely denticulate. Length of body, 8 mm.; of tegmina and wings, 3 mm.; of hind femora, 2.75 mm.; of forceps, 2.4 mm. 2 ♀. Mexico, Sumichrast. (Smithsonian Institution.)

57. *Forficula exilis*. Head mahogany brown, smooth, the middle of it slightly tumid, with a pair of broad shallow oblique sulcations between the antennæ, meeting each other above and forming a \wedge ; labrum dusky; palpi brownish luteous, paler toward tip; basal joint of antennæ mahogany brown; remaining joints (at least as far as the ninth) reddish brown. Pronotum luteous, rufous in the middle, quadrate, slightly longer than broad, scarcely broader posteriorly, the sides straight, the posterior border gently convex, the surface smooth, flat, a little depressed excepting down the middle, which bears an impressed line, fading posteriorly. Tegmina nearly twice as long as the pronotum, luteous, duskily bordered on the inner side; wings scarcely extending beyond the tegmina, similarly colored; legs luteous, the femora slightly tinged with brown. Abdomen very slender, the sides scarcely convex, very dark mahogany brown, the surface minutely and sparsely punctulate; last segment quadrate, the posterior area deeply transversely depressed in the middle, with a slight short longitudinal impressed median line at the anterior limit of the same, preceded by a pair of submedian, almost equally short, very faintly impressed lines; the depression is bordered laterally next base of either arm of forceps by a blunt tubercle. Forceps rather simple, as long as the last four or five dorsal segments, rather broad at base, narrowing suddenly beyond, and then depressed cylindrical, slender and tapering, gently incurved and finely pointed; inner edge slightly tuberculato-denticulate, especially on the basal half, a slightly larger tubercle at the middle of the apical half. Pygidium a pointed flattened triangular lamina. Length of body, 10.5 mm.; of tegmina and wings, 2.5 mm.; of hind femora, 2.1 mm.; of forceps, 3.75 mm. 1 ♂. Texas; received from Mr. P. R. Uhler.

58. *Forficula aculeata*. Head uniform rather dark castaneous, smooth, gently tumid, with a pair of oblique, slightly bent impressions between the antennæ; palpi luteous; antennæ 12-jointed, dark brown, becoming paler away from the base, the extreme tips of some of the basal joints marked with blackish. Pronotum rather dark castaneous, the sides transparent and nearly colorless, quadrate, noticeably longer than broad, the sides parallel and straight, the hind border a little convex with rounded posterior angles, the surface smooth, nearly flat, with a broad and very shallow transverse postmedian impression, and a slight impressed longitudinal line about half as long as the pronotum, starting from a little behind the front edge. Tegmina nearly twice as long as the pronotum, squarely

docked at the tip, smooth, luteous, with the inner half, or nearly as much, obscured more or less heavily with fuscous. Wings wanting. Legs uniform luteous. Abdomen dark mahogany brown, sometimes varying to black, with the sides of the second and third segments blackish, the lateral plications of the third segment rather prominent, all the segments but the last finely punctate, the last as *F. californica* is described by Dohrn. Forceps of female rather more than half as long as the abdomen, simple, slender, attingent, straight to the incurved tip, the inner edge quite straight to the tip, minutely denticulate; those of male about three-quarters as long as the abdomen, the basal fourth moderately stout, triquetral, distant, directed slightly outward and bent at the very base downward, the remainder bent inward, but continuing the downward direction until near the horizontal tip, cylindrical, slender, nearly equal, until a little beyond the middle of the outer half, where at the emission of an inner rather stout tooth, it tapers to a fine point, begins an inward curve and takes on the horizontal direction; the inner side is edged, at base laminate, and rather finely denticulato-tuberculate. Pygidium of ♀ stout, bluntly trifid, of ♂ very slender, acicular, half as long as the last segment. Length of body, 10.75 mm.; of antennæ, 7.5 mm.; of tegmina, 3.1 mm.; of hind femora, 2.8 mm.; of forceps, ♂, 5 mm., ♀, 3.5 mm. 3 ♂, 5 ♀ from N. York (Coll. Uhler), Northern Illinois (Kennicott), Southern Michigan (Prof. M. Miles, No. 124). A single specimen is marked "Cuba?"

This species is closely allied to *F. californica* Dohrn, judging from the description, but differs from it in the total want of wings, and the structure of the male forceps. It appears also to be nearly allied to *F. pulchella* Serv., a species I do not know, but the absence of wings in our species prevents its reference to it. *F. pulchella* is possibly a Labia.

59. Labia rotundata. Head dark mahogany brown, darkest below, but the labrum lighter, uniformly and slightly tumid; palpi reddish brown, darkest on the apical half; antennæ more than 10-jointed, the basal joint reddish brown, beyond a little dusker, the whole briefly pilose. Pronotum nearly as broad as the head, reddish luteous, paler at the sides, scarcely longer than broad, the posterior angles very broadly rounded, but the hind margin otherwise straight; it is depressed excepting in the middle of the front half, on which is a finely impressed median line; lateral edges almost marginate. Tegmina about half as long again as the pronotum, dull brownish

luteous, squarely docked at tip; wings extending but a little beyond the tegmina, blackish. Legs luteous. Abdomen very broadly expanded, the sides unusually convex, blackish brown above, the apical joints and whole under surface mahogany brown; surface very finely longitudinally striate. Pygidium large, truncate, conical; forceps scarcely one-third the length of the abdomen, simple, widely separated, cylindrical, straight, incurved at tip, finely pointed, briefly pilose, wholly unarined. Length of body, 6 mm.; of (ten joints of the) antennæ, 2.75 mm.; of tegmina and wings, 2 mm.; of hind femora, 1.6 mm.; of forceps, 1.5 mm. 1 ♀. Mexico.

60. *Labia brunnea*. Head rather dark castaneous, smooth, slightly tumid, with two faint, broad, short, shallow, nearly longitudinal impressions between the antennæ; mouth parts luteo-castaneous. Antennæ 11-jointed, luteo castaneous. Pronotum nearly as broad as the head, scarcely broader posteriorly than anteriorly, of equal length and breadth, quadrate, the posterior angles rounded, and the hind border otherwise straight, slightly tumid anteriorly, with a slight median impressed line, which posteriorly is supplanted by a pair of closely approximated similar lines, rather dark castaneous, broadly bordered on the sides and hind margin with luteous, which is separated from the castaneous by a blackish fuscous belt. Tegmina castaneo-fuscous, darkest next the base, fully half as long again as the pronotum, squarely docked at the tip; wings rudimentary, useless. Legs castaneo-luteous, the femora slightly infuscated. Abdomen dark castaneous, the posterior borders of the segments marked with blackish, the sides of the abdomen somewhat convex, the lateral plications of second and third segments rather slight, the surface very finely and faintly punctulate. Pygidium of male very coarse and stout, bluntly conical and truncate. Forceps of male more than half as long as the abdomen, simple, trigono-cylindrical, a little depressed, rather stout, horizontal, gently incurved, with a basal and preapical slight triangular depressed pointed tooth on the inner edge; the apex bluntly pointed, depressed. Forceps of female (pupa) about one-third as long as the abdomen, simple, straight on the middle half, but as a whole slightly sinuate, horizontal, depressed, but broadly ridged above, the inner edge delicately toothed, fading out toward tip. Length of body, 6.5 mm.; of antennæ, 2.8 mm.; of tegmina, 1.5 mm.; of hind femora, 1.5 mm.; of forceps, ♂, 2.25 mm., ♀ (pupa), 1.6 mm. 1 ♂, 1 ♀. Cuba (P. R. Uhler).

DESCRIPTION OF THREE SPECIES OF LABIA FROM THE SOUTHERN UNITED STATES.

Labia guttata. Head castaneous black, the labrum dark luteous and the parts above luteo-castaneous; surface smooth, shining, a little tumid, with two pair of inconspicuous punctæ, one above the other, between the antennæ; palpi luteous; antennæ 12-13-jointed, luteous at base, growing infuscated beyond, the apical half brownish fuscous, the whole sparsely pilose. Pronotum slightly narrower than the head in front, of equal width with it behind, of the color of the head, with sides narrowly, but distinctly, and hind border very broadly, but inconspicuously, dull luteous; surface smooth, nearly flat, with a slight median impressed line; sides slightly marginate; hind border scarcely convex. Tegmina very dark castaneous brown, half as long again as the pronotum, tip squarely docked; exposed part of wings half as long as the tegmina, brownish fuscous, with a large, slightly longitudinal, clear luteous spot in the middle of the base, and the entire edge inconspicuously and narrowly margined with dull luteous. Legs uniform bright luteous. Abdomen with the three or four basal joints blackish, beyond blackish castaneous; the terminal joints rich dark castaneous; sides nearly parallel in the ♂, somewhat convex in the ♀, the lateral plications of the second and third segments slight, the surface minutely punctured, but the last segment nearly smooth; this segment is quadrate above in the male, with straight hind border, scarcely depressed posteriorly in the middle, with a short median impressed line not quarter the length of the segment, near the hind border; in the ♀ the dorsal segment is tapering, and has a distinct longitudinal impressed line on the whole apical half of the segment. Pygidium of ♂ as in *L. Burgessii*. Forceps of ♀ of the color of the abdomen, but growing darker toward the tip, moderately stout, more than half the length of the abdomen, depressed trigonate, with a superior ridge, slightly upturned, slightly incurved on apical half, which is almost laminate and bluntly pointed, the inner edge rugose, with a slight blunt extreme basal tooth; forceps of ♂ rather slender, rather more than half as long as the abdomen, shaped as in *L. Burgessii*. Length of body, 6 mm.; of antennæ, 3.5 mm.; of tegmina and wings, 3.1 mm.; of hind femora, 1.6 mm.; of forceps, ♂, 2.5 mm., ♀, 2.25 mm. 1 ♂, 2 ♀. Texas (G. W. Belfrage).

This species agrees better than any I have seen with *Forf. pulchella* Serv., judging from the imperfect descriptions of Serville; but it is

much smaller than that species, does not agree with it in the proportion of its parts, and has no such disparity in the length of the forceps in the two sexes. The forceps of the male of *L. guttata* possesses a postmedian tooth, which could hardly have been overlooked by Serville, and the parti-colored abdomen, if a constant character would distinguish it from Serville's species. It curiously resembles *Spongophora brunneipennis* Serv.

Labia Burgessii. Head rather dark castaneous, tumid, with two slight depressions between the antennæ, lower part of front, labrum and palpi pale luteous. Antennæ 13-jointed, the basal two or three joints pale luteous, beyond brownish luteous becoming dusker toward the tip, the joints sparsely pilose. Pronotum as broad anteriorly as the head, broadening posteriorly a very little, sides straight, posterior border gently convex, the front portion very slightly tumid, a slightly impressed median line, sides slightly marginate and a little paler than the slightly infuscated luteous disc. Tegmina fusco-luteous, but little longer than the pronotum, squarely docked at the apex; wings nearly obsolete, useless. Legs very pale luteous, with a few scattered hairs. Abdomen rather long, with nearly parallel sides, especially in the male, dark rich castaneous with dusky incisures, the last joint generally a little paler; lateral plications of second and third segments slight; last segment of male quadrate, twice as broad as long, of female subquadrate, tapering, about two-thirds as long as broad, of both depressed in the middle posteriorly, with a very short longitudinal impressed line in the anterior half of the depression, and next the inner base of the forceps, especially in the male, a minute blunt roughened tubercle. Pygidium of female small quadrate, scarcely longer than broad, minutely trifid, or rather armed apically with three minute teeth; of male large, quadrate, more than twice as broad as long, the outer angles produced to a minute point, the posterior border sinuato-convex with a slight point, more or less distinct, near the middle of either lateral half. Forceps of ♀ not more than one-third the length of the abdomen, simple, trigonate and straight on basal half, flattened and incurved on apical half, the inferior inner edge roundly and slightly excised at base, and beyond minutely and bluntly denticulate as far as the middle, the superior edge similarly denticulate on the basal half with a slightly more prominent tooth at the base. Forceps of ♂ about one-half the length of the abdomen, slender, horizontal, gently arcuate, longitudinally channeled on basal third above, de-

pressed on apical half, scarcely tapering and bluntly pointed, the inferior inner edge with a basal depressed distinct laminate pointed tooth, the laminate, more gently sloped, anterior edge of which is minutely denticulate, the inner surface with a similar but not laminate and blunter tooth a little farther from the apex than the basal tooth is from the base, the apical tooth occasionally subobsolete. Length of body, ♂, 6.75-8.25 mm., ♀, 7.9-9.35 mm.; of antennæ, 2.6-4.75 mm.; of tegmina, 1.5-1.9 mm.; of hind femora, 1.4-1.7 mm.; of forceps, ♂, 2.5-3.5 mm., ♀, 2.15-3 mm. 7 ♂, 7 ♀, and 7 immature specimens. Pilatka, Florida, Feb., 1868 (E. Burgess).

The pygidium of the immature ♀ is bifid, and the forceps resemble those of the mature animal, but are simpler, irregularly denticulate almost to the tip and lack the regular basal excision. The pygidium of the young ♂ is also bifid, and as long as broad, and the forceps closely resemble those of the immature female, but are slenderer, more cylindrical, and not so closely attingent. It is apparently a female of this species, but with inaccurate coloring, which is figured in Glover's Illustrations of N. Am. Entomology, Orth., pl. vi, fig. 19, and credited to New York.

Labia melancholica. Head reddish black, the lower part of the front and labrum reddish luteous, blotched with blackish, the rest tumid, smooth, shining. Palpi rather bright luteous. Antennæ 13-jointed, bright luteous on basal third, beyond growing more and more fuscous to the completely dusky tip, the joints longer than usual, but distinctly moniliform, very sparsely pilose. Pronotum slightly broadest posteriorly, and here as broad as the head, tumid in a large semicircular area in front, and here reddish black, the remainder flat, rather dark luteous; it is a little longer than broad, the sides slightly marginate, the posterior angles broadly rounded, the hind border otherwise scarcely convex; median impressed line very slight. Tegmina reddish black, nearly twice as long as the pronotum, the extremity squarely docked with a slight obliquity; exposed part of wings nearly two-thirds as long as the tegmina, slender, blackish castaneous. Legs luteous, the middle and hind femora slightly castaneous. Abdomen long and slender, the sides nearly parallel, dark mahogany brown, blackish toward the base, lighter beneath, shining, the surface distantly and very finely and slightly wrinkled or subrugulose; lateral plications inconspicuous; last segment slightly tapering, two-thirds as long as broad, smooth on either side of the middle, slightly tumid and rugulose next base of forceps, and between de-

pressed with a short median longitudinal impressed line. Forceps of female less than half the length of the abdomen, moderately stout, simple, nearly horizontal but slightly curved, the convexity downward, depressed trigonate with a superior ridge, tapering regularly, straight on the basal two-thirds and then gently and regularly incurved, the tip bluntly pointed; inner edge with a superior small basal bifid tooth, and on the inferior edge slight denticulate sinuations on the basal half. Length of body, 8.25 mm.; of antennæ, 4 mm.; of tegmina and wings, 3.6 mm.; of hind femora, 1.75 mm.; of forceps, 2.1 mm. 1 ♀. Waco, Texas; collected by G. W. Belfrage on February 24th.

A slender, graceful and very dark colored species, nearly related to the almost apterous *L. Burgessii*. Probably the male forceps of the two species will prove to be somewhat similar.

ORTHOPTERA FROM THE ISLAND OF GUADALUPE.

The four Orthoptera described below comprise all the species that were collected by Dr. E. Palmer during a recent visit to the Island of Guadalupe, off the coast of Lower California. Two of the species, as will be seen, also occur in the southern part of California, and one of them also in Mexico; the third Acridian will very probably be discovered there, but the *Gryllus*, which appears to be more nearly related to *G. peruvianus* Sauss., than to any other species, will not improbably prove indigenous, and is remarkable for the brevity of its tegmina and wings. None of them appear to have been described.

***Gryllus insularis*.** Of medium size. Head shining black, tumid, with a broad shallow depression between the lateral ocelli and just above the median ocellus; antennæ nearly twice as long as the body, black, growing a little testaceous from end of the basal third toward the tip; middle of mandibles and galea more or less tinged with reddish; palpi blackish brown. Pronotum black, shining, nearly twice as broad as long, with a slight median impressed line more distinct in front; front border straight, or scarcely angulate in front, the angle opening forward; hind border straight, or slightly full in the middle, very delicately marginate, laterally with a few curved

black bristles. Tegmina rather dark testaceous, slightly more (σ) or slightly less (φ) than half as long as the abdomen, rather broad, the reticulation prominent. Wings scarcely as long as the tegmina. Fore and middle legs, as well as the sternum, blackish; the sides of the femora, under surface of the tibiæ and all but the upper edge of the tarsi, suffused more or less with dark red. Hind femora extending beyond the end of the abdomen, large and tumid, reddish, excepting the blackish tip; hind tibiæ and tarsi dark fusco-castaneous. Abdomen black; cerci nearly as long as the abdomen, dark brown, and clothed with black hairs; ovipositor as long as the body, reddish testaceous, with a black base and blackish tip, and a couple of lateral black lines. Length of body, σ , 18 mm., φ , 20 mm.; width of pronotum, σ , 6.25 mm., φ , 6.5 mm.; of antennæ, φ , 39 mm.; of tegmina, σ , 7 mm., φ , 6-7 mm.; of hind femora, σ , 12.5 mm., φ , 13.5 mm.; of cerci, φ , 13 mm.; of ovipositor, 19 mm.

1 σ , 2 φ . Guadalupe Isl., off Lower California (E. Palmer), specimens dried after immersion in alcohol.

Acridium vagum. Size of *A. americanum* (Drury). Head varying from livid to light clay-brown, marked with black; the whole lower half of the head and the region behind the eyes, is heavily blotched with it, in the latter case, mostly arranged in oblique specks, while the rest of the face is serially punctate with black, especially on either side of the carinæ; on either edge of the frontal costa the black dots are clustered into a straight black stripe, which continues past the eyes over the vertex to the back of the head; a black stripe also runs from the lower edge of the eyes to the lower hinder edge of the head (these colours become partially or wholly obliterated after immersion in alcohol); the vertex is slightly concave, the lateral foveolæ flat, equal, punctate, the frontal costa scarcely contracted between the antennæ, slightly widening below, a little channelled at and a short distance below the ocellus; palpi livid, flecked with fuscous; antennæ pale cinereous, a little lighter at the tip. Dorsum and whole posterior lobe of pronotum grayish cinereous, or clay-brown, obscurely flecked with longitudinal dashes of blackish fuscous, especially upon the anterior lobe; lower third of lateral lobes fusco-luteous, surmounted by a very broad blackish belt which fades on entering the posterior lobe; anterior lobe faintly rugulose, posterior coarsely punctate, both with an equal, blunt, not greatly elevated median ridge, cut by transverse furrows in the middle, in the middle of the anterior half and in the middle of the second quarter; front margin

slightly full; hind margin bent at a right angle, the angle broadly rounded. Tegmina with the basal three-fifths pale clay-brown, the apical portion nearly vitreous, the whole very heavily flecked with blackish fuscous, rather lighter apically; these markings are present on the upper area of the closed tegmina only as minute spots or dots, but along the median area, commencing at the very base, they form longitudinal quadrate patches, broadening, becoming less compact and less intense away from the base; the apical half is filled with small, not very unequal, squarish patches, irregularly and profusely distributed. Wings pellucid, scarcely fuliginous, with a faint yellowish tinge at the base, all the nervures black, excepting at the extreme costal border, where just beyond the middle some of them are ferruginous. Hind femora pale hoary blue, with very pale yellowish brown oblique rays on the sides, faintly and distantly punctate with black, with faint ferruginous outer and superior carinæ, the upper surface broadly banded with black in four broken bands; hind tibiæ dusky plumbeous, the upper surface blackish, excepting at the tip, the spines white, with the apical third black. Length of body 45-52 mm.; of antennæ (13 est.)-15 mm.; of pronotum, 9-10.5 mm.; of tegmina, 48-53.5 mm.; of hind femora, 25-28 mm.

8 ♀. Island Guadalupe, off Lower California (E. Palmer); San Diego, California (J. Behrens); California (H. Edwards).

This insect belongs to the division *Schistocerca* of Stål.

***Trimerotropis vinculata*.** Ash gray, blotched with dark fuscous; foveolæ of the head distinct, the costæ being prominent throughout; tip of fastigium with a rather deep circular or posteriorly angulated pit having abrupt sides, reaching the margins of the lateral foveolæ; antennæ dark brown, very obscurely annulate with darker and lighter colors. Median carina of pronotum distinct only on front lobe, and cut behind the middle by the transverse sulcus, the hinder portion of the anterior lobe somewhat corrugate; hind border of pronotum forming a right angle. Tegmina as long as the hind legs, the basal third testaceous, with a fuscous cloud on its apical third, and fuscous dots sprinkled over the rest; middle third ashen, with a fuscous cloud traversing the entire breadth of the wing in the middle, broadest centrally; apical third pellucid, sprinkled with small fuscous spots, fainter than the previous ones, closely clustered basally, distant and fainter apically. Wings very faint lemon-yellow at base, pellucid with black nervules at apex, and near the middle a broad band of blackish fuliginous; it commences on the middle of the costal margin,

half as broad as the tegmina, suddenly broadens by a narrow interior shoot to double or more than double its former width, and then passes nearly at right angles to the costal border, but directed a little obliquely outward, slightly broadening as it goes, to the outer margin, which it turns toward the anal angle, narrowing and fading until it has traversed nearly or quite three-quarters of the anal area; its margins are ill defined and slightly irregular, but its general form is a sickle-like curve, which greatly resembles that of most species of *Spharagemon*. Hind femora ash-gray, with two or three faint, ill defined, slightly oblique fuscous bands. Hind tibiae yellow, the spines black tipped. Length (of an average specimen), ♂, 19 mm., ♀, 28 mm.; of antennæ, ♂, 8 mm., ♀, 9.75 mm.; of tegmina, ♂, 24 mm., ♀, 30 mm.; of hind femora, ♂, 11 mm., ♀, 13.5 mm.

6 ♂, 9 ♀. Guadalupe Island, off Lower California (E. Palmer); San Diego, Cal. (H. Edwards, No. 9); Mexico, (Coll. Schaum).

Trimerotropis lauta. Head livid gray, completely sprinkled with fuscous dots, giving a fuscous appearance to the upper surface; antennæ dirty dull luteous, annulate with dark fuscous on basal half. Pronotum flat above, the front lobe dirty yellow, its posterior half tuberculate; posterior lobe livid, heavily dotted with reddish brown on the little rugosities; upper half of lateral lobes reddish brown, lower half like the head. Tegmina scarcely shorter than the hind legs, obscure pellucid on basal half, heavily flecked with light brownish fuscous blotches, mostly concentrated into a large broken patch, occupying most of the basal third of the wing, and a triangular patch in the middle of the wing, its apex next the costa; outer half of wing pellucid, sprinkled almost uniformly with small moderately distant subequal faint fuscous spots. Wings pellucid, with no trace of any band, a few of the apical cells filled with a fuscous cloud. Hind femora reaching the tip of the abdomen, ash gray, with a premedian and postmedian narrow lateral oblique brownish fuscous stripe. Hind femora livid, flecked with fuscous, with a faint pale prebasal annulus, the apex infuscated and the spine-tips black. Length of body, 15.5 mm.; of antennæ, 8.5 mm.; of tegmina, 18 mm.; of hind femora, 8.5 mm.

1 ♂. Guadalupe Island, off Lower California (E. Palmer). Dried after immersion in alcohol.

Remarkable for the entire absence of a band, which in the other Guadalupe species, *T. vinculata*, reaches the extremest dimensions.

CRITICAL AND HISTORICAL NOTES ON FORFICULARIÆ; INCLUDING DESCRIPTIONS OF NEW GENERIC FORMS AND AN ALPHABETICAL SYNONYMIC LIST OF THE DESCRIBED SPECIES.

In the tenth edition of his *Systema Naturæ*, Linné placed the two common species of European earwigs (*auricularia* and *minor*) in the genus *Forficula*, among the Colcoptera. Fabricius, in all his works, placed this genus at the head of his *Ulonata* (= *Dermaptera* DeGeer, *Orthoptera* auct.) following close upon the Coleoptera. Latreille, in 1796, was the first to recognize the wider separation of the earwigs from the other *Dermaptera*, and divided the whole order into three (unnamed) sections; of which the earwigs formed the first, *Blatta* the second, and the remaining *Dermaptera* the third. Duméril, in his *Zoologie analytique* (1806), recognizing the family value of the group, called it *Labidoures* — a name which, from its gallic dress, has no more claim upon our attention than *perce-oreille*. Kirby¹ subsequently maintained the ordinal character of the group, and gave it the name *Dermaptera*, in which he was followed in 1815 by Leach. But neither can this name be retained, since it was given by DeGeer in 1773 to the whole suborder afterward called *Ulonata* by Fabricius (1775), and—excluding the earwigs—*Orthoptères* by Olivier (1789).² Moreover, Latreille, recognizing it in its true character as a family of *Dermaptera*, had already³ given the group the name of *FORFICULARIÆ*, and this name must be retained. After tabulating the

¹ *Trans. Linn. Soc. Lond.*, xi, 87 note (1813).

² By a strange oversight or neglect, the work of the distinguished Swedish naturalist, who first separated these insects from the Hemiptera of his fellow countryman Linné, has been very generally overlooked, and the term *Orthoptera* has been usually applied to the suborder—a name which, in its Latin form, was not proposed until 1806 by Latreille (in *Sonnin's Buffon*).

³ *Considerations générales sur l'ordre naturel des Crustacés, etc.* (1810).

synonymy of this group, we will examine in alphabetical sequence each of the generic names which have been given to the different members of the family, setting forth in detail its first usage, and so far as necessary its subsequent treatment; and including in the list a few generic names now first proposed. Generic names which cannot be used are followed by an asterisk.

FORFICULARIÆ.

- Labidoures* ou *Forficules* Duméril, Zool. anal., 257 (1806).
Labidoures Serres, Ann. Mus. Hist. Nat., xiv, 65 (1809).
Labidura Burm., Germ. Zeitschr. f. Ent., ii, 20 (1840).
Labidouroidæ Agass., Nomencl. Zool. Index, 199 (1846).
Forficularie Latr., Cons. Gén., 244 (1810).
Forficulædes Billb., Enum. Ins., 63 (1820).
Forficulidæ Steph., Syst. Cat. Br. Ins., 299 (1829).
Forficulina Newm., Ent. Mag., ii, 424 (1834).
Forficulites " " " " " "
Dermoptera Kirb. (nec DeG.), Trans. Linn. Soc. Lond., xi, 87 (1813).
Dermoptera Burm., Handb. Ent., ii, 743 (1838).
Placoda Billb., Enum. Ins., 63 (1820).
Euplekoptera Westw., Zool. Journ., v, 327 (1831).
Euplezoptera Westw., Introd. Class. Ins., i, 398 (1839). (Scr. Eupleoptera Fisch., Orth. Eur., 58, note—1858).
Harmoptera Fieb., Kelch, Orth. Obeschl., 3 (1852).

ANCISTROGASTER.

1855. Stål, Öfv. k. Vet. Ak. Förh., 349: describes a single species, *luctuosus* (from Brazil), which is therefore the type. In 1865, Dohrn, in his monograph, describes other American species allied to this, placing them all in a new world section of a larger group, which contains many species from both hemispheres. To this enlarged group he gives a new name. But even if his view of the generic affinities were correct, the name *Ancistrogaster* would have to be given to the whole group. (See *Opisthocosmia*.) The genus is confined to the tropics of the New World.

ANECHURA.

This generic name (*ἀνέχου, οὐρά*) is proposed for the single Fabrician species, *bipunctata*. It approaches the gerontogeic *Opisthocosmia*, and is remarkable for the great breadth of its thoracic sterna, and especially of the metasternum, which is broader than long. The antennæ are 11-12 jointed. The legs are long, the middle pair especially approaching the hind legs in length, at least in the female; these legs are also inserted almost, or quite as near the hind legs as the fore legs, as in certain species of *Forficula* proper. The abdomen is plump and dilated, and has a small tubercle on the sides of the fourth and fifth ventral segments of the male; the forceps are simple in the female, but strangely contorted in the male, bearing a superior basal tooth or angulated shoulder, beyond which the arms are curved strongly downward, and then bent backward. It belongs to Europe.

ANISOLABIS.

1853. Fieber, *Lotos*, III, 257: proposes this name for two European species—*maritima* and *moesta*, which are strictly congeneric. *Maritima* may be considered as the type, since it is the best known and older of these two, and on account of its being absolutely apterous, like most of the other species which must be added to the group.

No reference is made to this name in Marschall's *Nomenclator Zoologicus*. The genus is widespread, occurring in both hemispheres, and in Australasia. See also *Forcinella* and *Brachylabis*.

APACHYS.

1831. Serv., *Ann. Sc. Nat.*, xxii, 35 [*Apachys*]: *depressus* Pal.-Beauv. (sp.) is the only species, and therefore type.

1839. Serv., *Orth.*, 54 [*Apachya*]: the same.

1846. Agass., *Nom. Zool. Ind.*, 27: corrects the spelling as above.

Two species have since been added by Dohrn. The genus belongs to the tropics of the Old World.

APTERYGIDA.*

1839. Westw., *Class. Ins.*, I, 406: proposes this name for G n e's section b, of Division II of *Forficula*,¹ including the species

¹ *Saggio di una Monografia delle Forficule indigene. Padova, 1832.*

with perfect tegmina but rudimentary wings, viz., *pedestris* Bon. and *decipiens* Gén¹; the former is *albipennis* Meg., and neither of them can be generically separated from *Forficula* Linn.

That genus, it is true, is very large, and contains species differing to a much greater extent than usual from one another, some species having, for instance, the middle pair of legs much closer to the front legs than others; but there are no grounds for separating *albipennis* from *decipiens*; and the latter species is altogether similar to *auricularia* (the type of *Forficula*) except in the brevity of the wings, a feature of great variability even within species in§ Dermaptera generally. Apterygida, then, having no *raison d'être*, must fall before *Forficula*. There is also an earlier generic name, *Apterygia* (Latr. Moll., 1825).

BRACHYLABIS.*

1864. Dohrn, Stett. Ent. Zeit. xxv, 292, proposes this name for the following species; *mauritanica* Luc., *maritima* Bon., *angulifera* (from Guinea), *chilensis* Blanch., and *modesta* Gén¹.

The only character given common to both sexes, by which to distinguish this genus from his *Forcinella* (= *Anisolabis*) is the lateral plication of the second and third segments of the abdomen, which is wanting in the species grouped by him under *Forcinella*. In other respects, as the author acknowledges, it altogether agrees (vollkommen übereinstimmend) with that group; and he further adds, that this plication is sometimes very indistinct in the species of *Brachylabis*, especially on the second segment. The males of *Brachylabis* are also stated to be peculiar in having the posterior borders of the fourth and following abdominal segments angular at the sides, and produced to a point; the females possess it to a less degree, so that when the plications are absent it is not always possible to determine into which genus a species should fall.

There is scarcely a genus of *Forficulariæ* in which the lateral plications of the second and third abdominal segments are not either distinctly present in all the species, or else totally absent; it is this feature, doubtless, which has led Dohrn to separate, as he has done, his two groups, *Brachylabis* and *Forcinella*; but in *maritima*, the type of his *Forcinella* (afterwards placed by him in *Brachylabis*!), we find some individuals in which the plications are tolerably distinct, while

¹ Westwood says, "three species are described," but the above are the only two.

there are others in which no trace of them whatever can be found. The species of *Forcinella* also (that is, those presenting no abdominal plications) vary to a considerable degree in the angular production of the sides of the abdominal segments, some in my possession surpassing in this particular the species *maritima*; so that it becomes certain that these distinctions are valueless; and as no others have been found we must group these apterous forms in a single genus, whose facies is then homogeneous. *Forcinella*, as the older name, would then absorb *Brachylabis*, were it not in its turn preoccupied, as we shall see, by *Anisolabis*. It is possible, however, that *angulifera* or *chilensis*, or both, may be generically distinct from the other species placed in the same group by Dohrn, and in that case *Brachylabis* could be retained. I have seen neither of them.

CARCINOPHORA.

This name (*καρκίνος, φέρω*) is proposed for the Peruvian species which I described a few years ago under the name of *Chelidura robusta*. The genus is allied to *Anisolabis*, but has fewer joints in the antennæ, and the first joint of the same very long, besides perfectly formed tegmina. The head is subtriangular, much longer than broad, somewhat broader than the pronotum, tumid, the posterior angles broadly rounded; eyes pretty large; antennæ 13-jointed, the first joint as long as the space between the antennæ, slender, increasing but little in size apically, second joint no longer than broad, globular, third three times as long as broad, fourth and fifth equal, together as long as the second and third combined, the others submoniliform, subequal, about as long as the third. Pronotum flat, a little longer than broad, tapering slightly, produced apically with well rounded hind border. Tegmina as long as the pronotum, squarely docked, the sides forming an acute angle with the dorsal area; wings wanting. Legs long, compressed, the middle nearly as long as the hind pair, the middle joint of tarsi minute, but produced beneath the apical joint, not lobed. Abdomen stout, the last segment of ♀ very large, above subquadrate, below almost as long as the rest of the abdomen and triangularly produced; sides of second and third dorsal segments with but slight plication. Forceps stout, short and simple in the ♀. The female only is known to me, and the single species comes from the Peruvian Andes.

CHELIDURA.

1831. Serv., Ann. Sc. Nat., XXII, 36: uses this name for the first time in a Latin form for the single species *aptera* Charp. Previously to this the name has been used in a Gallic form (Chélidoure) by Latreille, in 1825, in his Familles naturelles (410), where neither descriptions of any sort is given, nor mention made of any species; in 1829, in the 2d Edition of Cuvier's Règne Animal (V. 173), he again uses it without species or description, excepting to make it include "ceux qui sont aptères"; the described apterous species at that time were *aptera*, *simplex* and *sinuata* — all congeneric. Serville therefore used the name in the same sense as Latreille did in its Gallic form, and *aptera* must be considered the type.

It has always been used since in the same way, whenever the species have been generically separated from Forficula. The group is confined to Europe and Madeira.

CHELISOCHES. See LOBOPHORA.

CONDYLOPALAMA.

1847. Sund., Forh. Skand. Naturf., IV, 255: proposed for a species called *agilis* found in timber brought to Stockholm from Bahia; this is therefore the type.

The "provisional" description (the only one yet given) is very meagre and unsatisfactory; but in the possession of double-jointed? (tvåledade), blunt edged forceps it is certainly most peculiar. It is said to be extremely slender, destitute of both tegmina and wings, and to be probably a larval form; to have 3-jointed tarsi, 14-jointed antennæ, and the first joint of the hind tarsi large and oval. It is further described as greyish, with a black, smooth and highly polished mesothorax, and as 5 mm. long. It is not mentioned by Dohrn.

COPISCELIS.*

1853. Fieber, Lotos, III, 257: proposes this name for the Linnean *minor*; but it falls before the earlier *Labia* (q. v.). Marschall's Nomenclator contains no reference to this name.

CYLINDROGASTER.

1855. Stål, Ofv. K. Vet. Ak. Förh., 350: establishes this genus upon the new species *gracilis* (from Brazil).

1858. Stål, Eug. Resa, 306: places this genus under *Diplatys* Serv.

This, as pointed out by Dohrn, in his Monograph, is certainly a mistake, *Diplatys* differing from *Cylindrogaster* in important particulars; Dohrn describes other species, and I have called attention in a previous paper to the characters of the female, hitherto unknown. The genus has never been found outside the limits of Brazil. This generic name has since been used in other groups of animals.

DIPLATYS.

1831. Serv., Ann. Sc. Nat., xxii, 33: proposes this name for *macrocephala* Pal.-Beauv., which is therefore the type.

It has not since been used except for the same species by Serville in his later work (*Orthoptères*) and by Stål, erroneously (see *Cylindrogaster*). Dohrn mentions it only to say that he believes he has seen a very poor specimen of the species, and promises further particulars which are not given. The species comes from W. Africa.

ECHINOSOMA.

1839. Serv., Orth., 34: founded upon the single species *afra* Pal.-Beauv.

Dohrn has since added several species. They all come from the tropics of the Old World, including northern Australia. Semper has since used this name for a group of Echinoderms.

FORCINELLA.*

1862. Dohrn, Stett. Ent. Zeit., xxiii, 226: establishes this genus in describing the species *azteca* (from Mexico), but directly specifies *Forf. maritima* Géné as the type. Notwithstanding this, while retaining *Forcinella* in his later Monograph, he transfers *maritima* to a new genus *Brachylabis*! Both of these names, however, fall before the earlier *Anisolabis* (q. v.). *Forcinella* is not included by Marschall in his *Nomenclator Zoologicus*.

FORFICESILA.*

1831. Serv. (ex Latr.), Ann. Sc. Nat., XXII, 32: *gigantea* Latr.

Under the Gallic name Forficésile this genus was proposed without mention of species and without further description than "aillés" by Latreille in his Familles du Règne Animal, 410 (1825). Later, in Cuvier's Règne Animal, 2e éd., v, 173 (1829), still using the French name, he refers to it the winged species with more than 14 joints to their antennæ; *gigantea* alone is specified. Serville therefore uses it wholly in the Latreillean sense. Since then (Serville, Dohrn) it has always been used in the same sense, but as *gigantea* was the type of Labidura as early as 1815, this generic name must fall before it.

FORFICULA.

1758. Linn., Syst. Nat., Ed. x, i, 423: founds the earliest of the genera of Forficulariæ upon the species described as *auricularia* and *minor*.

1810. Latr., Consid., 433, specifies *auricularia* as the type.

In this sense, whether used in a more or less restricted manner, the name has always been employed. Dohrn divides it into three sections, according to peculiarities of the male forceps; perhaps better characters would be found in the pygidium or in the relative position of the middle legs. The genus is by far the richest in species of any of the Forficulariæ, and is more widely spread than any, being found in almost every place where Forficulariæ occur, and on every continent. The genus happily retains the oldest name in the group, and has given its name to the family. Several species have been found in the European Tertiaries.

LABIA.

1815. Leach, Edinb. Encyc., ix, 118: founds this genus upon *minor* Linn., which therefore becomes the type.

Whenever since used it has always been in this sense. Serville does not refer to it in any way either in 1831 or 1839.

The genus should be placed in juxtaposition to Forficula and not be separated from it, as Dohrn has done, by the interposition of Sparratta, Chelisoches, Ancistrogaster and Opisthocosmia. It differs from Forficula principally in the simple character of its middle tarsal joint and in the shorter moniliform joints of the antennæ. It is numerous

in species, and only less widely spread than *Forficula*, occurring probably over the entire extent of the torrid and temperate part of every continent, excepting Australia. Though abundant in all the East Indies, it has also not been brought from Oceanica. See *Copiscellis*. Oken proposed the generic name *Labio* for a group of mollusks in 1815.

LABIDOPHORA (see PLATYLABIA).

LABIDURA.

1815. Leach, *Edinb. Encyl.*, ix, 118: bases this name upon the species *riparia (gigantea)*, which, therefore, is the type.

Whenever since employed, it has always been in the same sense. Serville does not even refer to it, either in 1831 or 1839. Although this word in a Gallic form was proposed as early as 1806, for the whole group of earwigs, it did not receive a Latin dress (with the same scope) until 1840,¹ and therefore the present use of this word is not affected. The genus is one of the richest in species and is widely spread in the Old World, especially in the East Indies and in Europe. It has not been found in Australia. But a single species has been described as indigenous to America (Jamaica) and this may prove to be wrongly placed here, as it is an apterous species. Fossil species have been found in the tertiaries of the Rocky Mountains, but these, too, should perhaps be separated from this group. See also *Forficesila* and *Psalis*.

LOBOPHORA.*

1839. Serv., *Orth.*, 32: proposes this name for *rustarsis* (from Java), a species since determined to be identical with the older *morio*, which is therefore the type.

The name has since been employed by several authors (Stål, Dohrn, etc.) but is preoccupied in Lepidoptera (Curtis, 1825). *Chelisoche* (χηλίσκη, ὀχέω) may be used in its place. The genus is mainly, if not exclusively, confined to Australasia, including all the islands of the Indian Ocean and the neighboring main and Oceanica.

¹ See our synonymy of the family name.

MECOMERA.

1839. Serv., Orth., 53: founded upon the single species *brunnea* (from Cayenne), which is therefore the type. It has not been used since, and was unknown to Dohrn.

NANNOPYGIA.

1863. Dohrn, Stett. Ent. Zeit., xxiv, 60: established for a new species, *Gerstaeckeri* (from Ceylon).

NEOLOBOPHORA.

1875. Scudd., Proc. Bost. Soc. Nat. Hist., xvii, 281: established upon a species called *bogotensis* (from Bogota). Another has since been added from Mexico.

OPISTHOCOSMIA.

1865. Dohrn, Stett. Ent. Zeit., xxvi, 76: founded upon the following species: (I) *maculifera* (from Venezuela), *spinax* Dohrn, *luctuosus* Stål, *variegata* (from Venezuela); (II) *devians* (from Brazil), *centurio* (from Luzon), *armata* (from Sumatra), *forcipata* de Haan, *longipes* de Haan, *insignis* de Haan, *vigilans* Stål, *tenella* de Haan, and *ceylonica* Motsch. The first section is considered the equivalent of Stål's genus *Ancistrogaster*, which is thus sunk beneath a new name.

If the group as given by Dohrn is homogeneous, the name *Ancistrogaster* should be preserved for it; otherwise (and we believe this to be the case) *Ancistrogaster* (q. v.) should be retained for the species of the first section, and *Opisthocosmia* for those of the second. *O. devians*, however, would appear to belong rather to *Ancistrogaster*, and this would leave the Old World species alone to *Opisthocosmia*, of which *O. centurio* may be taken as the type.

PLATYLABIA.*

1867. Dohrn, Stett. Ent. Zeit., xxviii, 347: founded upon the following species described as new: *major* (from Celebes), *thoracica* (from Penang and Ceylon), *dimidiata* (from Luzon), and *Guineensis* (from Prince Island) — all from the tropics of the Old World.

The species are all unknown to me, and therefore no type will be designated. The generic name is too close to *Platylabus* (Wesmael, Hym., 1845) to stand, and may be supplanted by *Labidophora* (*λαβίς, φέρω*).

PSALIDOPHORA.*

1839. Serv., Orth., 29 : proposed by Serville to supplant his earlier name *Spongiphora* ; the species enumerated are *Lherminieri* (from Guadaloupe), *croceipennis* Serv. and *brunneipennis* (from N. America).

The type of *Spongiphora* was *croceipennis*, and Serville proposes to change the name because (vid. Orth., p. 17) many entomologists had observed to him that the pad was extremely small, and could often not be seen in dried specimens. Since, however, it exists, the first name, involving no inaccuracy, should be retained. The other species added to the group in 1839, are strictly congeneric with the original species, and hence the name must be dropped. See *Sphon-gophora*.

PSALIS.

1831. Serv., Ann. Sci. Nat., xxii, 34: founded upon *americana* Pal.-Beauv., and *riparia* (*morbida*) from an unknown locality. As Serville afterwards (Orth., 20-21) points out, the generic description of the abdomen is taken from individuals which had been broken and repaired by gluing the abdomen on again *belly upward!* Many of the peculiarities of the genus are taken from features dependant upon this accident. Serville consequently believes that the name should be suppressed, and places the two species in *Forficesila*, between which genus and *Psalis* he had, in 1831, interposed two genera.
1838. Burm., Handb. d. Ent., ii, 753 : uses it doubtfully for one of the sections into which he divides the single genus, *Forficula*, accepted by him, and places in it *americana* (*procera*) and *gagatina*; *riparia* (*gigantea*) is placed under the section *Forficesila*. Both on this account and because when the generic name *Psalis* was proposed, *riparia* was the type of *Labidura* (Syn. *Forficesila*), *Psalis*, if used at all, must take *americana* as its type. Dohrn places both species in the genus *Labidura*, and indeed at no great distance from each other. But they present so many points of structural dissimilarity that they should be generically separated.

Psalis, as represented by its type *americana*, has the following characters to contrast with those of *Labidura*. The short head, as pointed out by Serville, is more convex above; the antennæ are composed of fewer joints; the basal joint of the antennæ is longer and slenderer, and increases more gradually in size toward the apex; the pronotum is nearly as wide as the head; the prosternum broadens greatly and regularly in front of the legs; the legs are scarcely so slender nor so compressed; especially the fore femora are stouter; the abdomen of the female does not taper at the extremity, the last dorsal segment being quadrate, nearly as long as broad, and scarcely narrower behind than in front; while in *Labidura* it is transverse, nearly twice as broad in front as long, but scarcely broader behind than its length; besides, the penultimate ventral segment of *Psalis* ♀ leaves the sides of the last segment largely exposed; and the last segment itself is parted widely in the middle, while that of *Labidura* is entire. The forceps of the ♀ are much stouter in *Psalis* than in *Labidura*. Since writing the above, I find that Burmeister (Germ. Zeitschrift Ent., II, 82) has already remarked that if genera are to be separated *modo Servilleano*, *americana* and *riparia* (*gigantea*) must be placed apart.

The species of *Psalis* occur in the tropics of both worlds.

PYGIDICRANA.

1831. Serv., Ann. Sci. Nat., XXII, 30: proposes this name for the single species *v-nigrum* (from Brazil) which thereby becomes the type.

It has since been used by Serville, Burmeister, Stål [*Pydicrana*] and Dohrn in the same sense, each adding other species. Agassiz (Nom. Zool.) proposes *Pygodicrana* as a more correct form of the word (*πυγή, δίχρονον*). Burmeister (Germar Zeitschr. f. Ent., II, 79) suggests that *Dicranopygia* would have been better. The genus is moderately rich in species, most of which are found in the tropics of the Old World, including Australia; but two or three species are found in northern S. America.

PYRAGRA.

1831. Serv., Ann. Sc. Nat., XXII, 34: founds this genus upon the single species *fuscata* (from Cayenne), which is therefore the type. It is again employed by the author in his later work

(1839) for the same species, but does not seem to have been used since. Dohrn refers to neither genus nor species.

SPARATTA.

1839. Serv., Orth., 51: the genus is founded on *pelvimetra* (from Brazil). Other species have been added by Stål and Dohrn, all from tropical S. America.

SPONGOPHORA.

1831. Serv., Ann. Sc. Nat., xxii, 31 [Spongiphora]: proposes the name for *croceipennis* from Brazil.
1839. Serv., Orth., 29: supplants the name by that of *Psalidophora*, but, as we have remarked under that caption, for insufficient reasons. Guerin (Iconogr. Règne Anim., Ins. 326) referring to the very page where Serville explains his change, remarks that Serville altered the name because all Forficulariæ bore a pad between the claws! See *Psalidophora*.
1846. Agassiz, Nom. Zool., 349: proposes the more correct spelling *Spongophora*, adopted by me in 1862.

This group, under the name *Psalidophora*, has been used by nearly every author that has treated of the Forficularians and in the same sense. All the known species, with a single exception, come from the temperate and tropical parts of America; *S. quadrimaculata* from temperate S. Africa. I can find no points of generic distinction between a fragmentary specimen of this species and the common *S. brunneipennis* of the U. States.

TAGALINA.

1863. Dohrn, Stett. Ent. Zeit., xxiv, 44: proposes this name for two species, *Semperi* (from Luzon) and *grandiventris* Blanch.

Grandiventris, as the older species, may be taken as the type. The genus is confined to the Australasian islands. The name is unfortunately chosen from its close resemblance to *Tagalis* (Stål, Hem., 1860.)

THERMASTRIS.

1863. Dohrn, Stett. Ent. Zeit., xxiv, 61: proposed for *brasiliensis* Gray and *Saussurei* Dohrn, both formerly placed under *Pygidicrana*; two other species have since been added by myself. *Bra-*

siliensis may be chosen as the type. All the species are from the tropics of America.

TYPHLOLABIA.

This name (*τυφλόζ, λαβίς*) is proposed for the remarkable form described by Philippi from Chili under the name of *Forficula* ? larva. According to Philippi the head is as broad as long, tapering anteriorly, the angles rounded; it is altogether *eyeless*; the antennæ are *approximate* at the base, as long as the head and thorax, *30-40 jointed*, the first joint short, thick, cylindrical; the *second of equal length*, obconical, the third to the twelfth short cylindrical, the rest moniliform. Prothorax much narrower than the head, and hardly half so long; mesothorax a little broader, but narrower than the head, quadrate with rounded angles; the metathorax similar, but slightly larger. Neither tegmina nor wings are present. The legs are very short, the femora scarcely longer than the coxæ and trochanters together, the tibiæ of similar length, compressed; tarsi *one-jointed*, somewhat shorter than the tibiæ. Abdomen long and slender, the joints of about equal length, broadening up to the sixth, previous to which they are *longer than broad*; the forceps resemble those of *Anisolabis*, which it seems most to resemble; it is, however, exceedingly peculiar in many points of its structure, and especially in the particulars I have italicized above, in which it resembles no known Forficularians.

AN ALPHABETICAL CATALOGUE OF DESCRIBED FORFICULARIÆ; WITH OCCASIONAL BRIEF NOTES.

Ancistrogaster arthritica.

Ancistrogaster arthritica Scudd., Proc. Bost. Soc. Nat. Hist., XVIII, 253 (1876).
Brazil.

Ancistrogaster devians.

Opisthocosmia devians Dohrn, Stett. Ent. Zeit., XXVI, 79 (1865).
Brazil.

Ancistrogaster gulosa.

Ancistrogaster gulosa Scudd., Proc. Bost. Soc. Nat. Hist., XVIII, 263-64 (1876).
Mexico.

Ancistrogaster luctuosa.

Ancistrogaster luctuosus Stål, Ofv. K. Vet. Acad. Forh., XII, 349 (1855); Ib., Eng. Resa, Zool. Ins., 306, pl. 5, fig. 1 (1858).

Opisthocosmia luctuosa Dohrn, Stett. Ent. Zeit., XXVI, 78 (1865).

Brazil.

Ancistrogaster maculifera.

Opisthocosmia maculifera Dohrn, Stett. Ent. Zeit., XXVI, 77 (1865).

Forficula Petropolis Wood, Ins. Abroad, 279, fig. 138 (1874).

Venezuela.

Ancistrogaster spinax.

Ancistrogaster spinax Dohrn, Stett. Ent. Zeit., XXIII, 229-30, Pl. I, fig. 1, 1b (1862).

Opisthocosmia spinax Dohrn, Stett. Ent. Zeit., XXVI, 78 (1865).

Mexico.

Ancistrogaster variegata.

Opisthocosmia variegata Dohrn, Stett. Ent. Zeit., XXVI, 78 (1865).

Forficula appendiculata Charp., ms. [cf. Gerst., Bericht. Ent., 1855, 90-91].

Venezuela.

Anechura bipunctata.

Forficula bipunctata Fabr., Spec. Ins., I, 340 (1781); Ib., Mant. Ins., I, 224 (1787); Ib., Ent. Syst., II, 2 (1793); Gmel., Linn. Syst. Nat., I, iv, 2039 (1788); Vill., Linn. Ent., I, 427; IV, 373 (1789); Oliv., Encycl. méth., VI, ii, 467 (1792); Panz., Deutschl. Ins., H. 87, 10, fig. 10 (1802?); Burm., Handb. Ent., II, 754 (1838); Kitt., Bull. Soc. imp. nat. Mosc., XXII, 441-2, pl. 7, figs. 5-6 (1849).

Forficula biguttata Fabr., Ent. Syst., II, 2 (1793); Latr., Hist. nat. Crust. Ins., XII, 91 (1804); Ib., Gen. Crust. Ins., III, 82 (1807); Ib., Nouv. Diet. Hist. Nat., XII, 8, pl. D', figs. 17, 17 (1817); Charp., Horæ Ent., 68 (1825); Serv., Ann. Sc. Nat., XXII, §2 (1831); Ib., Rev. méth. Orth., 5-6 (1831); Ib., Orth., 43 (1839); Géné, Monog. Forf., 12 (1832); Fisch. Wald., Ent. Russ., IV, 40-41, pl. 1, fig. 1 (1848); Kitt., Bull. Soc. imp. nat. Mosc., XXII, 439-40, pl. 7, figs. 3-4 (1849); Fisch. Fr., Orth. Eur., 72-3, pl. 6, figs. 9, 9a-b (1853); Friv., Orth. Hung., 47-8 (1867).

Chelidura anthracina Kolen., Melet., V, 73, pl. 17, fig. 5 (1846).

Forficula anthracina Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 73 (1853).

Forficula Fabricii, Fieb., Lotos, III, 253-4 (1853); Ib., Syn. Eur. Orth., 70-1 (1853).

Europe.

Anisolabis angulifera.

Brachylabis angulifera Dohrn, Stett. Ent. Zeit., xxv, 294 (1864)-
Guinea.

Anisolabis annulicornis.

Forficula annulicornis Blanch., Gay, Hist. fis. Chile, Zool., vi, 10-11 (1853); Phil., Zeitsch. ges. Naturw., xxi, 217 (1863).

Forcinella annulicornis Dohrn, Stett. Ent. Zeit., xxv, 290-1.

Chili.

Blanchard says this species has rudimentary tegmina. Dohrn says it has not. Philippi says that one Chilian species is winged and he mentions this species, making some objections to Blanchard's description, but none to the statement that it has tegmina.

Anisolabis annulipes.

Forficesila annulipes Luc., Ann. Soc. Ent. Fr., Bull., 84-5 (1847).

Forcinella annulipes Dohrn, Stett. Ent. Zeit., xxv, 290 (1864).

Forficula (Labidura) annulipes Fisch. Fr., Orth. Eur., 69-70, pl. 6, fig. 6a-c (1853).
S. Europe; Madeira.

Anisolabis Antoni.

Forcinella Antoni Dohrn, Stett. Ent. Zeit., xxv, 289-90 (1864).

Venezuela.

Anisolabis azteca.

Forcinella azteca Dohrn, Stett. Ent. Zeit., xxxiii, 226-7 (1862);
Ib., ib., xxv, 291 (1864).
Mexico.

Anisolabis Blanchardi.

Forficula Blanchardi Le Guill., Rev. Zool., 1841, 292 (1841.)

Oceanica.

Anisolabis Brunneri.

Forcinella Brunneri Dohrn, Stett. Ent. Zeit., xxv, 291 (1864).

Australia.

Anisolabis chilensis.

Forficula chilensis Blanch., Gay, Hist. fis. Chile., Zool. vi, 10, pl. Orth. 1, fig. 1 (1851).

Brachylabis chilensis Dohrn, Stett. Ent. Zeit., xxv, 295-6 (1864).

Forficula testaceicornis Blanch., Gay, Hist. fis. Chile, Zool., vi, 11-12 (1851).
Chili.

Anisolabis colossea.

Forcinella colossea Dohrn, Stett. Ent. Zeit., xxv, 286-7 (1864).

A specimen in my collection from N. Caledonia (H. Dohrn) has no middle joint to the tarsi of one of the hind legs, though present on its mate.
Australia and neighboring islands.

Anisolabis geniculata.

Chelidura geniculata Montr., Ann. Soc. Linn. Lyon [n. s.] XI, 222-23 (1864). Woodlark Isl.

This species is more closely allied to *Anisolabis* than to *Chelidura*, but apparently should be placed in a distinct genus.

Anisolabis hottentotta.

Forcinella hottentotta Dohrn, Stett. Ent. Zeit., XXVIII, 344-5 (1867). Caffraria.

Anisolabis janeirensis.

Forcinella janeirensis Dohrn, Stett. Ent. Zeit., XXV, 285-6 (1864). Brazil.

I have not seen this species, but judging from the description, it may belong to *Carcinophora*.

Anisolabis laeta.

Brachylabis laeta Gerst., Arch. f. Naturg., XXXV, i, 221 (1869); *Ib.*, Glied.-Fauna Sans., 49, pl. 3, fig. 8 (1873). Zanzibar.

Anisolabis lativentris.

Forficula lativentris Phil., Zeitschr. ges. Naturwiss., XXI, 217-18 (1863). Chili.

Anisolabis littorea.

Forficula littorea White, Zool. Erebus and Terror, Insects, 24, pl. 6, figs. 4-5 (1846).

Forcinella littorea Dohrn, Stett. Ent. Zeit., XXV, 287-88.

N. Zealand.

Anisolabis major.

Forficula (Forficesila) major Brullé, Webb, Hist. nat. Canaries, II, ii, Ent. 74-75 (1835-42). Canary Isl.

Is it distinct from *A. maxima*?

Anisolabis marginalis.

Forcinella marginalis Dohrn, Stett. Ent. Zeit., XXV, 288-9 (1864).

Japan.

Anisolabis maritima.

Forficula maritima Bon., MS.; Géné, Monogr. Forf., 9-10 (1832); Ramb., Faun. Ent. Andal., II, 8-9 (1838).

Forficesila maritima Serv., Orth., 27-8 (1839); Luc., Expl. Alg., III, 5 (1846).

Forficula (Forficesila) maritima De Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 240 (1842).

Anisolabis maritima Fieb., Lotos, III, 257 (1853); *Ib.*, Syn. Eur. Orth., 74 (1853).

Forficula (Labidura) maritima Fisch. Fr., Orth. Eur., 68, pl. 6, figs 4, 4a-d (1853).

Forcinella maritima Dohrn, Stett. Ent. Zeit., xxiii, 226 (1862).

Brachylabis maritima Dohrn, Stett. Ent. Zeit., xxv, 293-4 (1864).

Forficula albipes Mus. Berol. [nec Fabr.?] teste Fieber, Lotos, III.

? *Hodotermes japonicus* Hag., Proc. Bost. Soc. Nat. Hist., XI, 399-400, fig.; XII, 139 (1868).

————— Savign., Deser. de l'Égypte, Planches Orth., pl. 1, fig. 6¹ (1809-13).

Europe; and thence nearly the whole world.

Dohrn says he has seen no great amount of variation in this species, although now so widely spread; I have, however, two males from S. Carolina in which the forceps entirely resemble those of the females, instead of being strongly bent inward in the middle and noticeably asymmetrical; in some specimens, too, the 13th or 14th antennal joints are bicolored, while in others they are similar to the rest; in some specimens again the posterior edge of the terminal dorsal segment of the abdomen is perfectly smooth, while in others it is puckered, as it were, being marked with short sinuous longitudinal striations; in one specimen from Nicaragua it is almost rugose.

Anisolabis mauritanica.

Forficesila mauritanica Luc., Expl. Alg., III, 4-5, pl. 1, figs. 1,-1a-d (1846).

Brachylabis mauritanica Dohrn, Stett. Ent. Zeit., xxv, 292 (1864).
Mauritania.

Anisolabis maxima.

Forficula (Forficesila) maxima Brullé, Webb, Hist. Nat. Canaries, II, ii. Ent. 74 (1835-42),

Forcinella maxima Dohrn, Stett. Ent. Zeit., xxv, 288 (1864).

Canary Isl.

Anisolabis moesta.

Forficula moesta Géné, MS.

Forficesila moesta Serv., Orth., 28 (1839).

Anisolabis moesta Fieb., Lotos, III, 257 (1853); Ib., Syn. Eur. Orth., 74 (1853).

Forficula (Labidura) moesta Fisch. Fr., Orth. Eur., 68-9, pl. 6, figs. 5, 5a-d (1853).

Forficula hispanica Herr.-Sch., Nom. Ent., Orth., 29-30 (1840).

S. Europe.

Anisolabis pacifica.

Forficula pacifica Erichs., Arch. f. Naturg., VIII, i, 247 (1842).
Van Dieman's Land.

Anisolabis pectoralis.

Forficula pectoralis Eschsch., Entom., 82-3 (1822); Ib., Œuvr. Ent.,
I, 85-6 (1835). Kamtschatka.

Anisolabis spectabilis.

Forficula spectabilis Phil., Zeitschr. ges. Naturw., XXI, 218-19
(1863). Chili.

Anisolabis Ståli.

Forcinella Ståli Dohrn, Stett. Ent. Zeit., xxv, 286 (1864). Java.

Anisolabis taurica.

Forficula taurica Motsch., MS.
Forficesila taurica Fisch. de W., Ent. Russ., IV, 47 (1846).
Chelidura ? taurica Fisch. Fr., Orth. Eur., 70 (1853). Tauria.
Belongs next *A. moesta* unless it is a pupa.

Anisolabis varicornis.

Forficula (Brachylabis) varicornis Smith, Ann. Mag. Nat. Hist.,
[4] XVII, 450-51 (1876). Kerguelen Island.

Apachys chartacea.

Forficula (Apachya) chartacea de Haan, Verh. Nat. Gesch. Ned.
Bezitt., Zool., 239, pl. XXIII, fig. 7 (1842).

Apachya chartacea Dohrn, Stett. Ent. Zeit., xxiv, 43-4 (1863).
Malay Archipelago.

Apachys depressa.

Forficula depressa Pal.-Beauv., Ins. Afr. Amér., ii, 36-7, Pl. I, fig.
5, 5a (1805).

Apachyus depressus Serv., Ann. Sc. Nat., xxii, 35 (1831); Ib., Rev.
méth. Orth., 9 (1831).

Apachya depressa Serv., Orth., 55 (1839); Dohrn, Stett. Ent.
Zeit., xxiv, 43 (1863). W. Africa.

Apachys Murrayi.

Apachya Murrayi Dohrn, Stett. Ent. Zeit., xxiv, 44 (1863).
W. Africa.

Carcinophora robusta.

Chelidura robusta Scudd., Proc. Bost. Soc. Nat. Hist., XII, 344
(1869); Ib., Ent. Notes, II, 29 (1869). Peru.

Chelidura acanthopygia.

Forficula acanthopygia Géné, Monogr. Forf., 13-14 (1832); Fieb.,
Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 73 (1853).

Forficula (Chelidura) acanthopygia Fisch. Fr., Orth., Eur., 83-4, pl. 6, figs. 20-20a-d (1853).

Chelidura acanthopygia Friv., Orth. Hung., 50-51 (1867); Dohrn, Stett. Ent. Zeit., xxviii, 342-43 (1847).

Forficula xanthopygia Schmidt, Verz. Krain Orth.,¹ 78 (186-).

Forficula aptera Schmidt (nec Muehlf.), Verz. Krain Orth., 78 (186-).

———— Savign., Descr. Egypte, Orth., pl. 1; figs. 71-1' (18-). Europe.

Chelidura analis.

Forficula analis Ramb., Faun. Ent. Andal., II, 10-11 (1838); Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854).

Forficula (Apterygida) analis Fisch., Orth. Eur., 79 (1853).

Europe.

Chelidura aptera.

Forficula aptera Muehlf. MS.; Charp., Horæ Ent. 69 (1825); Aud.-Brullé, Hist. nat. Ins., IX, 29, pl. 1, fig. 2 (1835).

Chelidura aptera Serv., Ann. Sc. Nat., xxii, 36 (1831); Ib., Rev. méth. Orth., 9 (1831); Dohrn, Stett. Ent. Zeit., xxviii, 342 (1867).

Forficula (Chelidoura) aptera Serv., Orth., 47-8 (1839).

Forficula (Chelidura) simplex Lafr. MS.; Germ. Faun. Ins. Eur., xi, pl. 17, figs. a-c (1824-37); Burm., Handb. Ent., II, 755 (1838); Serv., Orth., 48-9 (1839); Fisch. Fr., Orth. Eur., 82-3, pl. 6, figs. 19, 19a-b (1853).

Forficula simplex Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 73 (1854).

Forficula (Chelidura) dilatata Lafr., MS.; Burm., Handb. Ent., II, 755 (1838); Fisch. Fr., Orth. Eur., 80-1, pl. 6, figs. 16, 16a-e (1853).

Forficula dilatata Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth. 73 (1854).

Forficula alpina Génè, Monogr. Forf., 15 (1832); Fisch. Fr., Orth. Eur., 81-2 (1853); Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 73 (1854).

Forficula montana Génè, Monogr. Forf., 14-15 (1832).

Forficula pyrenaica Génè, Monogr. Forf., 15-16 (1832); [*pyrenaica*] Herr. Schaeff., Nom. Ent. Orth., 30-1 (1840). Europe.

Chelidura Dufouri.

Forficula (Chelidoura) Dufouri Serv., Orth., 49-50, pl. 1, fig. 5, 5a (1839).

¹ The reference is to an extract from some work, with original pagination.

Forficula (Chelidura) Dufouri Fisch. Fr., Orth. Eur., 81, pl. 6, figs. 17, 17a-c (1853).

Chelidura Dufouri Dohrn, Stett. Ent. Zeit., xxviii, 342 (1867).

Labidura vittigera Motsch., MS.

Chelidura vittigera Fisch. de W., Ent. Russ., iv, 48-49 (1846).

Europe.

Chelidura edentula.

Forficula edentula Woll., Ann. Mag. Nat. Hist., [3] 1, 20 (1858).

Madeira.

Chelidura paupercula.

Forficula paupercula Géné, Monogr. Forf., 14 (1832); Fieb., Lotos, III, 257 (1853); Ib., Syn. Eur. Orth., 73 (1854).

Forficula (Chelidura) paupercula Fisch. Fr., Orth. Eur., 83 (1853).

Chelidura paupercula Dohrn., Stett. Ent. Zeit., xxviii, 342 (1847).

Europe.

Chelidura setulosa.

Forficula setulosa Fieb., Lotos, III, 256-57 (1853); Ib., Syn. Eur. Orth., 73 (1854).

Europe.

Chelidura sinuata.

Forficula sinuata Lafresn., MS.; Germ., Faun. Ins. Eur. xi, pl. 16, figs. a-b (1824-37); Burm., Handb. Ent., II, 755-56 (1838); Serv., Orth., 49 (1839); Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 72-73 (1854).

Chelidura sinuata Fisch. de W., Ent. Russ., iv, 48 (1846).

Forficula (Chelidura) sinuata Fisch. Fr., Orth. Eur., 82, pl. 6, figs. 18, 18a (1853).

Forficula sinuata var. *macrolabia* Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 72 (1854).

Forficula sinuata var. *cyclolabia* Fieb., Lotos, III, 256 (1853); Ib., Syn. Eur. Orth., 73 (1854).

Europe.

Chelidura thoracica.

Chelidura thoracica Fisch. de W., Ent. Russ., iv, 50 (1846).

Forficula (Chelidura) thoracica Fisch. Fr., Orth. Eur., 84 (1853).

Europe (?)

This species, said by Fischer to be found in Finland (!) cannot possibly be referred to *Forficula auricularia* or *Labia minor*, the only species known from Finland.

Chelisoches albomarginatus.

Forficula (Psalidophora) albomarginata de Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 241 (1842).

Lobophora albomarginata Dohrn, Stett. Ent. Zeit., xxvi, 75 (1865).

Sumatra.

Chelisoches australicus.*Forficula australica* Le Guill., Rev. Zool., 1841, 292 (1841).*Forficula australica* Blanch., Voy. Pole Sud., Zool. iv, 351, Orth., pl. 1, fig. 3 (1853).*Lobophora australica* Dohrn, Stett. Ent. Zeit., xxvi, 72-3 (1865).
New Holland.**Chelisoches comprimens.***Chelisoches comprimens* Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 252-53 (1876).
Africa.**Chelisoches fuscipennis.***Forficula (Psalidophora) fuscipennis* de Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 241 (1842).*Lobophora fuscipennis* Dohrn, Stett. Ent. Zeit., xxvi, 75 (1865).
Sumatra.**Chelisoches laetior.***Lobophora laetior* Dohrn, Stett. Ent. Zeit., xxvi, 73 (1865).

Batchian.

Chelisoches Ludekingi.*Lobophora Ludekingi* Dohrn, Stett. Ent. Zeit., xxvi, 73-4 (1865).

Sumatra.

Chelisoches melanocephalus.*Lobophora melanocephala* Dohrn, Stett. Ent. Zeit., xxvi, 75-6 (1865).
India.**Chelisoches modestus.***Forficula modesta* Stål, Eug. Resa, Zool. Ins., 302 (1858).*Lobophora modesta* Dohrn, Stett. Ent. Zeit., xxvi, 74 (1865).

China.

Chelisoches morio.*Forficula morio* Fabr., Syst. Ent., 270 (1775); *Ib.*, Spec. Ins., i, 341 (1781); *Ib.*, Mant. Ins., i, 225 (1787); *Ib.*, Ent. Syst., ii, 5 (1793); Goeze, Ent. Beytr., i, 736 (1777); Gmel., Linn. Syst. Nat., i, iv, 2040 (1788); Oliv., Encycl. méth., vi, ii, 468 (1792); Burm., Handb. Ent., ii, 752 (1838).*Lobophora morio* Dohrn, Stett. Ent. Zeit., xxvi, 71-2 (1865).*Forficula (Psalidophora) rufitarsis* de Haan, Verh. Nat. Gesch. Ned. Bezitt. Orth., 241 (1842).*Lobophora rufitarsis* Serv., Orth., 33 (1839).*Lobophora nigronitens* Stål, Eug. Resa, Zool., Ins., 305 (1858).*Lobophora tartarea* Stål, Eug. Resa, Zool., Ins., 305 (1858).*Lobophora cincticornis* Stål, Eug. Resa, Zool., Ins., 305 (1858).

Islands of Pacific and Indian Oceans and neighboring main.

Chelisoches simulans.*Forficula simulans* Stål, Eug. Resa, Zool., Ins., 302 (1858).*Lobophora simulans* Dohrn, Stett. Ent. Zeit., xxvi, 74 (1865).

Malay Archipelago.

Chelisoches superbus.*Lobophora superba* Dohrn, Stett. Ent. Zeit., xxvi, 71, (1865).

Malay Archipelago.

Chelisoches tasmanicus.*Forficula tasmanica* Blanch., Voyage Pole Sud, Zool., iv, 350-51; Orth., pl. 1, fig. 2 (1853).

Tasmania.

Condylopalama agilis.*Condylopalama agilis* Sund., Forh. Skand. Naturf., iv, 255 (1847).

Brazil.

Cylindrogaster gracilis.*Cylindrogaster gracilis* Stål, Ofv. k. Vet. Akad., Forh., xii, 350 (1855); Dohrn, Stett. Ent. Zeit., xxiv, 58-9 (1863).*Diplatys gracilis* Stål, Eug. Resa, Zool., Ins., 306 (1858). Brazil.**Cylindrogaster nigra.***Cylindrogaster nigra* Seudd., Proc. Bost. Soc. Nat. Hist., xviii, 251-52 (1876).

Brazil.

Cylindrogaster Sahlbergi.*Cylindrogaster Sahlbergi* Dohrn, Stett. Ent. Zeit., xxiv, 59 (1863).

Brazil.

Cylindrogaster thoracica.*Cylindrogaster thoracicus* Dohrn, Stett. Ent. Zeit., xxiv, 59 (1863).

Brazil.

Diplatys macrocephala.*Forficula macrocephala* Pal.-Beauv., Ins. Afr. Amér., ii, 36, pl. Orth. 1, fig. 3 (1805).*Diplatys macrocephala* Serv., Ann. Sc. Nat., xxii, 33 (1831); Ib., Rev. méth. Orth., 7 (1831); Ib., Orth., 51 (1839). W. Africa.**Echinosoma afrum.***Forficula afra* Pal.-Beauv., Ins. Afr. Amér., ii, 35, pl. Orth. 1, fig. 1 (1805).*Echinosoma afrum* Serv., Orth., 34-5 (1839); Dohrn, Stett. Ent. Zeit., xxiv, 63-4 (1863). W. Africa.**Echinosoma horridum.***Echinosoma horridum* Dohrn, Stett. Ent. Zeit., xxiv, 66 (1863).

Java.

Echinosoma parvulum.*Echinosoma parvulum* Dohrn, Stett. Ent. Zeit., xxiv, 66 (1863).

Ceylon.

Echinosoma sumatranum.

Forficula (Echinosoma) sumatrana de Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 241 (1842).

Echinosoma sumatranum Dohrn, Stett. Ent. Zeit., xxiv, 65 (1863).
E. Indies.

Echinosoma Wallbergi.

Echinosoma Wallbergi Dohrn, Stett. Ent. Zeit., xxiv, 64-5 (1863).
Caffraria.

Echinosoma Westermanni.

Echinosoma Westermanni Dohrn, Stett. Ent. Zeit., xxiv, 65-6 (1863).
E. Indies.

Echinosoma Yorkense.

Echinosoma Yorkense Dohrn, Stett. Ent. Zeit., xxx, 234 (1869).
N. Australia.

Forficula aculeata.

Forficula aculeata Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 262-63 (1876).
Northern United States, east of the Mississippi.

Forficula africana.

Forficula africana Dohrn, Stett. Ent. Zeit., xxvi, 86-7 (1865).
Africa.

Forficula albipennis.

Forficula albipennis Muehlf. MS.; Charp., Hor. Ent., 68 (1825); Burm., Handb. Ent., II, 755 (1838); Friv., Orth. Hung., 49-50 (1867); Dohrn, Stett. Ent. Zeit., xxvi, 99 (1865).

Chelidura albipennis Steph., Ill. Brit. Ent., Mand., vi, 7, pl. 28, fig. 5 (1835).

Forficula (Apterygida) albipennis Fisch. Fr., Orth. Eur., 77-3, pl. 6, figs. 14, 14 a-b (1853).

Forficula media Hagenb. [nec Marsh.], Symb. Faun. Ins. Helv., 16, figs. 7-8.

Forficula pedestris Bon. MS.; Géné, Monogr. Forf., 13 (1832); Serv., Orth., 45 (1839); Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854).

Labidura curta Motsch. MS.

Chelidura curta Fisch. de W., Ent. Russ., iv, 49 (1846).

Forficula Freyi Dohrn, Stett. Ent. Zeit., xx, 106 (1859); Meyer-Dür, Neue Denkschr. allg. Schweiz. Gesellsch., xvii, 28 (1860).

Europe.

Forficula albipes.

Forficula albipes Fabr., Mant. Ins., I, 224 (1787); Ib., Ent. Syst., II, 3 (1793); Gmel., Linn. Syst. Nat., I, iv, 2039 (1788); Oliv., Encyl. méth., vi, 467 (1792).
W. Indies.

This species appears to be nearly allied to *F. bimaculata* Pal-Beauv., if it be not identical with it.

Forficula ancylura.

Forficula ancylura Dohrn, Stett. Ent. Zeit., xxvi, 91-2 (1865).

Phillipines.

Forficula arachidis.

Forficula arachidis Yers., Ann. Soc. Ent. France [3], viii, 509-11, pl. 10, figs. 33-5 (1860).

S. Europe.

Forficula auricularia.

Forficula auricularia Linn., Syst. Nat., ed. x, i, 423 (1758); Fabr., Syst. Ent., 269 (1775); Ib., Spec. Ins., i, 340 (1781); Ib., Mant. Ins., i, 224 (1787); Ib., Ent. Syst., ii, 1 (1793); Goeze, Ent. Beytr., i, 734 (1777); Herbst., Fuessl. Arch. Ins., vii-viii, 183 (1786); Gmel., Linn. Syst. Nat., i, iv, 2038-39 (1788); Vill., Linn. Ent., i, 425-26 (1789); Oliv., Encycl. méth., vi, ii, 466, pl. 246, fig. Forf., 1a-c (1792); Rossi, Fauna Etrusca, i, 316 (1795); Schrank, Faun. Boica, i, ii, 720 (1798); Marsh., Col. Brit., ii, 529, pl. 30 (1802); Ib., Ent. Brit., i, 529 (1802); Panz., Deutschl. Ins., pl. 87, 8, fig. 8 (1802?); Latr., Hist. Nat. Crust. Ins., xii, 190 (1804); Ib., Gen. Crust. Ins., iii, 32 (1807); Ib., Nouv. Dict. Hist. Nat., xii, 8 (1817); Leach, Edinb. Encycl., Amer. ed., viii, 707 (1816); Ib., Zool. Misc., iii, 99 (1817); Ib., Sam. Comp., 216 (1819); Zeit., Orth. Suec., 36-8 (1821); Ib., Faun. Ins. Lapp., 443-44 (1828); Ib., Ins. Lapp. descr., 246 (1838); Charp., Horae Ent., 67 (1825); Dufour, Ann. Sc. Nat., xiii, 346-47, pl. 19, figs. 4-8 (1828); Phil., Orth. Berol., 56 (1830); Serv., Ann. Sc. Nat., xxii, 32 (1831); Ib., Rev. méth. Orth., 5 (1831); Ib., Orth., 36-8 (1839); Géné, Monogr. Forf., 10-12 (1832); Stevens, Ill. Brit. Ent., Mand., vi, 4-5, pl. 28, fig. 1 (1835); Aud.-Brullé, Hist. Nat. Ins., ix, 29-30, pl. 1, figs. 3, 3a (1835); Curt., Brit. Ent., pl. 560. No. 1, lower figures (1835-40); Ramb., Faun. Ent. Andal., ii, 6 (1838); Burm., Handb. Ent., ii, 753 (1838); Guer., Iconogr. Règne An., 326, pl. 52, fig. 2 (1840-44); Fisch. Wald., Ent. Russ., iv, 38-40 (1846); Luc., Expl. Alg., iii, 6 (1846); Borek, Skand. Rätv., Ins. Nat. Hist., 6-11, pl. 1, fig. 1 (1848); Fisch. Fr., Orth. Eur., 74-5, pl. 6, figs. 11, 11 a-t (1853); Fieb., Lotos, iii, 254-55 (1853); Ib., Syn. Eur. Orth., 71-2 (1854); His., Finl. Orth., 9-10 (1861); Dohrn, Stett. Ent. Zeit., xxvi, 98-9 (1865); Friv., Orth. Hung., 48-9 (1867).

Forficula auricularia var. *cyclolabia* Fieb., Lotos, iii, 254 (1853); Ib., Syn. Eur. Orth., 71 (1854).

Forficula cyclolabia Schmidt, Verz. Krain Orth., 77 (186-).

Forficula auricularia var. *macrolabia* Fieb., Lotos, III, 254 (1853);
Ib., Syn. Eur. Orth., 71 (1854).

Forficula macrolabia Schmidt, Verz. Krain Orth., 78 (186-).

Forficula major De Geer, Mém., III, 545-52, pl. 25, figs. 16-25 (1773);
Ib., Ed. Goeze, III, 353-57, pl. xxv, figs. 16-25 (1780);
Retz., Gen. Sp. Ins., 101 (1783).

Forficula parallela Fabr. Syst. Ent., 270 (1775); Ib., Spec. Ins., I, 341 (1781);
Ib., Mant. Ins., I, 225 (1787); Ib., Ent. Syst., II, 4-5 (1793);
Goeze, Ent. Beytr., I, 736 (1777); Gmel., Linn. Syst. Nat., I, iv, 2039 (1788);
Oliv. Encycl. méth., VI, ii, 468 (1792).

Forficula media Marsh., Col. Brit., 530 (1802); Ib., Ent. Brit., I, 530 (1802);
Steph., Ill. Brit. Ent., Mand., VI, 5, pl. 28, fig. 2 (1835).

Forficula neglecta Marsh., Col. Brit., II, 529-30 (1802); Ib., Ent. Brit., I, 529-30 (1802).

Forficula infumata Muehlf., MS.; Charp., Horae Ent., 70 (1825);
[strigata sic!] Schmidt.

Forficula borealis Leach, MS.; Steph., Ill. Brit. Ent., Mand., VI, 5-6, pl. 28, fig. 3 (1835);
Curt., Brit. Ent., pl. 560, No. 2, upper figure (1835-40).

Forficula forcipata Steph., Ill. Brit. Ent., Mand., VI, 6, pl. 28, fig. 4 (1835);
Curt., Brit. Ent., pl. 560, No. 3 (1835-40).

Forficula lurida Fisch. Fr., Orth. Eur., 75-6, pl. 6, figs. 12 a-b (1853).

———— Savign., Descr., de l'Egypte, Planches Orth., pl. 1, figs. 4¹, 4^{1'}, 5¹, 5^{1'}, 5², 5^{2'} (1809-13).

Europe, Eastern United States.

Forficula bimaculata.

Forficula bimaculata Pal. Beauv., Ins. Afr. Amér., X, 165, pl. Orth. 14, fig. 1 (1817);
Serv., Ann. Sc. Nat., XXII, 32 (1831); Ib., Rev. méth. Orth., 6 (1831);
Ib., Orth., 39 (1839). St. Domingo.

Serville says "antennes de dix-sept articles, selon M. de Bauvois."
Beauvois himself says "dix articles aux antennes."

Forficula bolcensis.

Forficula bolcensis Mass., Stud. Pal., 15-16, pl. 1, figs. 5-7 (1856).
Italy [fossil].

Forficula brachynota.

Forficula brachynota de Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 243, pl. 23, fig. 10 (1842);
Dohrn, Stett. Ent. Zeit., XXVI, 94 (1865). E. Indies.

Forficula californica.

Forficula californica Dohrn, Stett. Ent. Zeit., xxvi, 85-6 (1865).
California.

Forficula capensis.

Forficula capensis Thunb., Act. Soc. Reg. Scient. Ups. ix, 52
(1827). Cape of Good Hope.

The generic position of this insect cannot even be conjectured until the species is recovered.

Forficula cingalensis.

Forficula cingalensis Dohrn, Stett. Ent. Zeit., xxvi, 89 (1865).
Ceylon.

Forficula circulata.

Forficula circulata Dohrn, Stett. Ent. Zeit., xxvi, 95-6 (1865).
India.

Forficula decipiens.

Forficula decipiens Géné, Monogr. Forf., 13 (1832); Serv., Orth., 46 (1839); Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854); Dohrn, Stett. Ent. Zeit., xxvi, 99 (1865).

Forficula (Apterygida) decipiens Fisch. Fr., Orth., Eur., 76-7, pl. 6, figs. 13a-b (1853).

Forficula decipiens var. *cyclolabia* Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur., Orth., 72 (1854).

Forficula decipiens var. *macrolabia* Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur., Orth., 72 (1854).

Forficula pallidicornis Brullé, Exp. Scient. Morée, III, ii, 81 [pl. 29, fig. 2] (1832); Fieber, Lotos, III, 254 (1853); Ib., Syn. Eur. Orth., 71 (1854).
Europe.

Forficula brevis Ramb., Faun. Ent. Andal., II, 9-10 (1838); Fieb., Lotos, III, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854).

Forficula Doumerci.

Forficula Doumerci Serv., Orth., 41 (1839). Cayenne.

Forficula elongata.

Forficula elongata Fabr., Ent. Syst., II, 4 (1793). W. Indies.
It is possible that this may be a Spongophora.

Forficula Erichsoni.

Forficula ruficeps Erichs. [nec Burm.], Archiv. f. Nat., VIII, ii, 246-47 (1842).

Apterygida Erichsoni Dohrn, Stett. Ent. Zeit., xxiii, 231 (1862).
Tasmania.

Forficula erythrocephala.

Forficula erythrocephala Oliv. [nec Fabr.], *Encycl. méth.*, vi, 468 (1792).

? *Forficula natalensis* Stål, *Ofv. k. Vetensk. Akad. Förh.*, xii, 348 (1855). S. Africa.

Forficula exilis.

Forficula exilis Scudd., *Proc. Bost. Soc. Nat. Hist.*, xviii, 262 (1876). Texas.

Forficula fasciata.

Forficula fasciata Thunb., *Act. Soc. Reg. Scient. Ups.*, ix, 52 (1827). Cape of Good Hope.

The genus to which this species should be referred is indeterminate from the description.

Forficula Fedtschenkoi.

Forficula Fedtschenkoi Sauss., *Fedtsch. Turkestan*, 6, pl. 1, fig. 2 (1874). Sarafschan and Ferghana.

? Forficula flavipennis.

Forficula flavipennis Fabr., *Ent. Syst.*, ii, 5 (1793). Senegal.

Forficula flexuosa.

Forficula flexuosa Fabr. *Syst. Ent.*, 269 (1775); *Ib.*, *Spec. Ins.*, i, 341 (1781); *Ib.*, *Mant. Ins.*, i, 224 (1787); *Ib.*, *Ent. Syst.*, ii, 3 (1793); *Goeze, Beitr.*, i, 735 (1777); *Gmel., Linn. Syst. Nat.*, i, iv, 2039 (1788); *Oliv., Encycl., méth.*, vi, 468 (1792). Cayenne.

Perhaps this is *F. Percheroni* Guér.

Forficula gracilis.

Forficula gracilis Burm., *Handb. Ent.*, ii, 755 (1838). Brazil.

Forficula herculeana.

Forficula herculeana Fabr., *Ent. Syst. Suppl.*, 185 (1798).

St. Helena.

It is impossible to tell from the description to what genus this should be referred, but the species will doubtless be recovered. Perhaps it is an *Opisthoscosmia*.

Forficula hirsuta.

Forficula hirsuta Scudd., *Proc. Bost. Soc. Nat. Hist.*, xviii, 256-57 (1876). Brazil.

Forficula Huegeli.

Forficula Huegeli Dohrn, *Stett. Ent. Zeit.*, xxvi, 92-3 (1865).

Eastern India.

Forficula Jackeryensis.

Forficula Jackeryensis Pal.-Beauv., Ins. Afr. Amér., ii, 36, pl. Orth., 1, fig. 4 (1805); Serv., Orth., 42 (1839). W. Africa.

Forficula Jagori.

Forficula Jagori Dohrn, Stett. Ent. Zeit., xxvi, 94-5 (1865).

Luzon.

Forficula linearis.

Forficula linearis Eschsch., Entom., 81 (1822); Ib., Œuvr. Ent., I, 84 (1835). St. Catherina, Brazil.

Forficula lobophoroides.

Forficula lobophoroides Dohrn, Stett. Ent. Zeit., xxvi, 96 (1865).

Phillippines.

Forficula Lucasi.

Forficula Lucasi Dohrn, Stett. Ent. Zeit., xxvi, 98 (1865).

Syria, Egypt.

Forficula lugubris.

Forficula lugubris Dohrn, Stett. Ent. Zeit., xxiv, 230-31 (1862).

Mexico.

Dohrn does not mention this species in his Monograph.

Forficula luteipennis.

Forficula luteipennis Serv., Orth., 46 (1839) [cf. Burm., in Germ., Zeitschr. f. Ent., II, 81]; Dohrn, Stett. Ent. Zeit., xxvi, 87-8 (1865).

Forficula dichroa Stål, Eug. Resa, Zool. Ins., 301 (1858).

Brazil, Columbia.

Forficula luteipes.

Forficula luteipes Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 255 (1876). Brazil.

Forficula macropyga.

Forficula macropyga Westw., Royle's Himalaya, pl. 9, fig. 12 (teste Dohrn); Dohrn, Stett. Ent. Zeit., xxvi, 93 (1865). N. India.

Forficula metallica.

Forficula metallica Dohrn, Stett. Ent. Zeit., xxvi, 90-1 (1865).

E. India.

Forficula minuta.

Forficula minuta Heer, Urw. d. Schweiz, 367 (1865) *ined.*

Eningen [fossil].

Forficula nigripennis.

Forfiscelia (sic!) *nigripennis* Motsch., Bull. Soc. imp. Nat. Mosc., xxxvi, iii, 1-2 (1863).

Forficula nigripennis Dohrn, Stett. Ent. Zeit., xxvi, 89-90 (1865).

Ceylon.

Forficula oceanica.

Forficesila oceanica Le Guill., Rev. Zool., 1841, 292 (1841).

Forficula oceanica Blanch., Voy. Pole Sud, Orth., pl. 1, fig. 4 (1853). Oceanica.

This belongs to a yet uncharacterized genus, and is not *morio* as suggested by Erichson.

Forficula Orsinii.

Forficula Orsinii Géné MS.; Fieb., Lotos, III, 254 (1853); Ib., Syn. Eur. Orth., 71 (1854); Dohrn, Stett. Ent. Zeit., XX, 107 (1859); Ib., ib., XXVI, 96 (1865).

Forficula (Apterygida) Orsinii Fisch. Fr., Orth. Eur., 79-80 (1853). Europe.

Forficula parvicollis.

Forficula parvicollis Stål, Eug. Resa, Zool. Ins., 304 (1858).

Brazil.

Forficula Percheroni.

Forficula Percheron Guér., Guér. Perch., Gen. Ins., VI, iv, pl. 7 (1835-8).

Forficula Percheroni Dohrn, Stett. Ent. Zeit., XXVI, 85 (1865).

Forficula elegans Klug MS., Burm., Handb. Ent., II, 753 (1838).

Sphongophora bipunctata Scudd., Bost. Journ. Nat. Hist., VII, 415 (1862).

Psalidophora bipunctata Dohrn., Stett. Ent. Zeit., XXV, 419-20 (1864). Brazil.

The figure given by Percheron differs from the type of my *bipunctata* only in having the hind border of the prothorax more rounded, and is very probably an error of the engraver.

The specimen in the Harris Collection (presumably from Massachusetts, but, if so, very probably imported) is marked in his manuscript catalogue, "May 20, 1827. From Z. Cook, Esq."

Forficula plagiata.

Forficula plagiata Fairm., Arch. Ent., II, 257, pl. 9, fig. 3 (1858).

W. Africa.

Judging from a transcript of the description and figure kindly made for me by Dr. LeConte, this seems to be a true *Forficula*.

Forficula primigenia.

Forficula primigenia Heer, Urw. d. Schweiz, 367, fig. 227 (1865).

(Eningen [fossil]).

Forficula pubescens.

Forficula pubescens Géné MS.; Serv. Orth., 46-7 (1839); Fieb.,

Lotos, III, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854); Dohrn, Stett. Ent. Zeit., xxvi, 99 (1865).

Forficula (Apterygida) pubescens Fisch. Fr., Orth., Eur., 77, pl. 6, figs. 15a-f (1853). Europe.

Forficula pulchella.

Forficula pulchella Serv., Orth., 42 (1839). New York.

Forficula recta.

Forficula recta Heer, Urw. d. Schweiz, 367, fig. 226 (1865).
Eningen [fossil].

Forficula ruficeps.

Forficula ruficeps Burm., Handb. Ent., II, 755 (1838); Dohrn, Stett. Ent. Zeit., xxvi, 88 (1865).

Apterygida ruficeps Dohrn, Stett. Ent. Zeit., xxiii, 231-2 (1862).
Mexico.

Forficula ruficollis.

Forficula ruficollis Fabr., Ent. Syst., Suppl., 185 (1798); Charp., Hor. Ent., 69 (1825); Burm. Handb. Ent., II, 754 (1838); Fieb., Lotos, III, 254 (1853); Ib., Syn. Eur., Orth., 71 (1854); Fisch. Fr., Orth. Eur., 73-4, pl. 6, figs. 10, 10a, a*, b (1853); Dohrn, Stett. Ent. Zeit., xxvi, 97 (1865).

Forficula bætica Ramb., Faun. Ent. Andal., II, 6-7, pl. 1 figs. 6-8 (1838). Europe.

Forficula scabriuscula.

Forficula scabriuscula Serv., Orth., 38-9 (1839). S. America.

Forficula senegalensis.

Forficula senegalensis Lefebvr. MS.; Serv. Orth., 39-40 (1839).
Senegal.

Forficula serrata.

Forficula serrata Serv., Orth., 40 (1839); Dohrn, Stett. Ent. Zeit., xxvi, 97-8 (1865). Africa.

Forficula smyrnensis.

Forficula smyrnensis Serv., Orth., 38 (1839); Fieb., Lotos, III, 254 (1853); Ib., Syn. Eur. Orth., 71 (1854); Fisch. Fr., Orth. Eur., 71-2, pl. 6, figs. 8, 8a (1853); Dohrn, Stett. Ent. Zeit., xxvi, 96-97 (1865). Asia Minor.

Forficula speculigera.

Forficula speculigera Stål, Ofv. k. Vetensk. Akad. Förh., XII, 349 (1855). N. Grenada.

Forficula suturalis.

Forficula suturalis Serv. [nec Burm.] Orth., 40-1 (1839). Brazil.

Forficula taeniata.

Forficula taeniata Dohrn, Stett. Ent. Zeit., xxiii, 230 (1862); *Ib.*,
ib., xxvi, 85 (1865). Southern U. S. to Brazil.

Specimens (♂, ♀) taken by Mr. B. P. Mann, at São Sebastião,
Brazil, agree with specimens from Mexico, except in being of a
lighter color, so that the vittæ of the tegmina are not so conspicuous;
they are also slightly smaller.

Forficula tolteca.

Forficula tolteca Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 261
(1876). Mexico.

Forficula vara.

Forficula vara Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 260-
61 (1876). Mexico.

Forficula variana.

Forficula variana Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 253-
54 (1876). Liberia.

Forficula variicornis.

Forficula variicornis Scudd., Proc. Bost. Soc. Nat. Hist., xviii,
255-56 (1876). Brazil.

Forficula vellicans.

Forficula vellicans Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 254-
55 (1876). Brazil.

Forficula Wallacei.

Forficula Wallacei Dohrn, Stett. Ent. Zeit., xxvi, 88 (1865).
N. Guinea.

Forficularia problematica.

Forficularia problematica Wey., Arch. Mus. Teyl., ii, 28, pl. 3,
figs. 25, 26, 26a (1869); *Ib.*, Ins. Foss. Bav., 28, pl. 3, figs. 25, 26, 26a
(1869). Solenhofen [fossil].

Labia amoena.

Forficula amoena Stål, Ofv. k. Vet. Akad. Förh., xii, 350 (1855);
Ib., Eng. Resa, Zool. Ins., 303-4 (1858).

Labia amoena Dohrn, Stett. Ent. Zeit., xxv, 425-26 (1864).
E. Indies.

Labia annulata.

Forficula annulata Fabr., Ent. Syst., ii, 4 (1793). W. Indies.

Labia arcuata.

Labia arcuata Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 257 (1876).
Brazil.

Labia bilineata.

Labia bilineata Scudd., Proc. Bost. Soc. Nat. Hist., xii, 345 (1869);
Ib., Ent. Notes, ii, 30 (1869). Peru.

Labia brunnea.

Labia brunnea Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 264 (1876). Cuba.

Labia Burgessii.

Labia Burgessii Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 266-67 (1876).

Forficula sp., Glov., Ill. N. Am. Ent. Orth., pl. vi, fig. 19 (1872). Florida.

Labia chalybea.

Labia chalybea Dohrn, Stett. Ent. Zeit., xxv, 429 (1864). Venezuela.

Labia curvicauda.

Forfiscelia (sic!) *curvicauda* Motschl., Bull. Soc. imp. Nat. Mosc., xxxvi, iii, 2-3, pl. 2, fig. 1 (1863).

Labia curvicauda Dohrn, Stett. Ent. Zeit., 428-29 (1864). Ceylon.

Labia dilaticauda.

Forfiscelia (sic!) *dilaticauda* Motsch., Bull. Soc. imp. Nat. Mosc., xxxvi, iii, 3-4 (1863). Ceylon.

Labia dorsalis.

Forficula dorsalis Burm., Handb. Ent., ii, 754 (1838). Columbia.

Labia Ghilianii.

Labia Ghilianii Dohrn, Stett. Ent. Zeit., xxv, 424-25 (1864). S. America.

Labia gravidula.

Forficula (*Apterygida*) *gravidula* Gerst., Arch. f. Naturg., xxxv, i, 221 (1869); *Ib.*, Glied.-Fauna Sans., 50 pl. 3, fig. 9 (1873).

Zanzibar.

Labia guttata.

Labia guttata Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 265-66 (1876). Texas.

Labia luzonica.

Labia luzonica Dohrn, Stett. Ent. Zeit., xxv, 427 (1864). E. Indies

Labia Maeklini.

Labia Maeklini Dohrn, Stett. Ent. Zeit., xxv, 428 (1864). Brazil.

? Labia marginalis.

Forficula marginalis Thunb., Act. Soc. Reg. Scient. Ups., ix, 52 (1827).

? *Forficula ochropus* Stål, Ofv. K. Vetensk. Akad. Förh., xii, 348 (1855).

Labia ochropus Dohrn, Stett. Ent. Zeit., xxviii, 345 (1867).

S. Africa.

Labia melancholica.

Labia melancholica Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 267-68 (1876). Texas.

Labia minor.

Forficula minor Linn., Syst. Nat. ed. x, i, 423 (1758); De Geer, Mém., iii, 553-54, pl. 25, figs. 26-7 (1773); Ib., ed. Goeze, iii, 358, pl. xxv, fig. 26-27 (1780); Fabr., Syst. Ent., 269 (1775); Ib., Spec. Ins., i, 340-41 (1781); Ib., Mant. Ins., i, 224 (1787); Ib., Ent. Syst., ii, 3 (1793); Goeze, Ent. Beytr., i, 735 (1777); Retz., Gen. Sp. Ins., 101 (1783); Herbst, Fuessl. Arch. Ins., vii-viii, 183 (1786); Gmel., Linn. Syst. Nat., i, iv, 2039 (1788); Vill., Linn. Ent. i, 426-27 (1789); Oliv., Encycl. méth., vi, ii, 467-68, pl. 246, fig. Forf. 2. 2^e (1792); Rossi, Fauna Etrusca, i, 316-17 (1795); Schrank, Fauna Boica, i, ii, 720 (1798); Marsh., Col. Brit., ii, 530 (1802); Ib., Ent. Brit., i, 530 (1802); Panz., Deutschl. Ins., H. 87.9, fig. 9 (1802?); Latr., Hist. Nat. Crust. Ins., xii, 91 (1804); Ib., Gen. Crust. Ins., iii, 82 (1807); Ib., Nouv. Dict. Hist. Nat., xii, 8 (1817); Zett., Orth. Suec., 38-9 (1821); Charp., Horæ Ent., 70 (1825), Phil., Orth. Berol., 6-7 (1830); Serv., Ann. Sc. Nat., xxii, 32 (1831); Ib., Rev. méth., Orth., 6 (1831); Ib., Orth., 44 (1839); Géné, Monogr. Forf., 12 (1832); Aud.-Br., Hist. Nat. Ins., ix., 30-31, pl. 1, fig. 4 (1835); Burm., Handb. Ent., ii, 754 (1838); Ramb., Faun. Ent. Andal., ii, 7-8 (1838); Fisch. Wald., Ent. Russ., iv, 42-4 (1846); Boreck, Skand. Rätv. Ins. Nat. Hist., 11-13 (1848); Fisch. Fr., Orth. Eur., 70-71, pl. 6, figs. 7a-d (1853); His., Finl. Orth., 10 (1861).

Labia minor Leach, Edinb. Encycl. Am. Ed., viii, 707 (1816); Ib., Zool. Misc., iii, 99 (1817); Ib., Sam. Ent. Comp., 216-17, pl. 4, fig. 16 (1819); Steph., Ill. Brit. Ent., Mand., vi, 8 (1835); Dohrn, Stett. Ent. Zeit., xxv, 426 (1864); Glov., Ill. N. A. Ent. Orth., pl. x. fig. 3 (1872).

Copiscelis minor Fieb., Lotos, iii, 257-58 (1853); Ib., Syn. Eur. Orth., 74-5 (1853).

Forficesila minor Friv., Orth. Hung., 46-7 (1867).

?*Forficula livida* Zschach, Mus. Lesk., 46 (1788); Gmel., Linn. Syst. Nat., i, iv, 2040 (1788).

Labia minuta Scudd., Bost. Journ. Nat. Hist., vii, 415-16 (1862); Ib., Hitchc. Geol. N. H., i, 380 (1874); Glov., Ill., N. Am. Ent., Orth., pl. i, figs. 10, 10 (1872); Prov., Nat. Can., viii, 18-9 (1876).

Europe, N. America.

Labia mucronata.*Forficula mucronata* Stål, Eug. Resa, Zool. Ins., 303 (1858).*Labia mucronata* Dohrn, Stett. Ent. Zeit., xxv, 423-24 (1864).

E. Indies.

Labia pallidicornis.*Forficula pallidicornis* Brullé. pl. 29, fig. 2.

Among the MSS. on Orthoptera of the late Mr. G. R. Gray (now in my possession), is a figure of this insect with the brief reference given above, which I have been unable to extend. The insect hardly appears to differ from *L. minor*.

Labia pilicornis.*Forfiscelia* (sic!) *pilicornis* Motschl., Bull. Soc. imp. Nat. Mosc., xxxvi, iii, 2 (1863).*Labia pilicornis* Dohrn, Stett. Ent. Zeit., xxv, 427 (1864).

Ceylon.

? Labia pygmæa.*Forficula pygmæa* Fabr., Ent. Syst., II, 3 (1793).

Guinea.

Labia quadrilobata.*Labia quadrilobata* Dohrn, Stett. Ent. Zeit., xxviii, 346 (1867).

Guinea.

Labia rotundata.*Labia rotundata* Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 263-64 (1876).

Mexico.

Labia unidentata.*Forficula unidentata* Pal.-Beauv., Ins. Afr. Amér., x, 165, pl. Orth. 14, fig. 3 (1817); Serv., Ann. Se. Nat., xxii, 32 (1831); Ib., Rev. méth. Orth., 6 (1831); Ib., Orth. 41-2 (1839).

St. Domingo.

Labia Wallacei.*Labia Wallacei* Dohrn, Stett. Ent. Zeit., xxv, 427-28 (1864).

N. Guinea.

Labidophora dimidiata.*Platylabia dimidiata* Dohrn, Stett. Ent. Zeit., xxviii, 348 (1867).

Luzon.

Labidophora guineensis.*Platylabia guineensis* Dohrn, Stett. Ent. Zeit., xxviii, 348-49 (1867).

Guinea.

Labidophora major.*Platylabia major* Dohrn, Stett. Ent. Zeit., xxviii, 347-48 (1867).

Celebes.

Labidophora thoracica.

Platylabia thoracica Dohrn, Stett. Ent. Zeit., xxviii, 348 (1867).
E. Indies.

? Labidura advena.

Labidura advena Mein., Nat. Tidsskr., [3] v, 279-80, pl. 12, figs. 5-8, 15 (1863).
Jamaica.

It is an apterous species, and appears to belong to a distinct group.

Labidura auditor.

Labidura auditor Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 252 (1876).
Formosa.

Labidura castanea.

Forficesila castanea Serv., Orth., 26 (1839).
Loc. ?

Labidura Dufourii.

Forficula Dufourii Desm., Faun. Franç. Orth., pl. 1, fig. 7 (1820).
Forficula pallipes Dufour (nec Fabr.), Ann. Gen. Sc. Phys., vi, 316-17, pl. 96, figs. 7, a-b (1820); Ramb., Faun. Ent. Andal., ii, 4-6 (1838).

Labidura pallipes Dohrn, Stett. Ent. Zeit., xxiv, 317 (1863).

Forficula lividipes Dufour, Ann. Sc. Nat., xiii, 340 (1828).

Forficesila meridionalis Serv., Orth., 26-7, (1839).

Forficula (Labidura) meridionalis Fisch. Fr., Orth. Eur., 67-8, pl. 6, figs. 3, 3a-c (1853).

Forficula meridionalis Fieb., Lotos, iii, 255 (1853); Ib., Syn. Eur. Orth., 72 (1854).
Europe.

Labidura femoralis.

Labidura femoralis Dohrn, Stett. Ent. Zeit., xxiv, 321-22 (1863).
Ceylon.

Labidura icterica.

Forficesila icterica Serv., Orth., 25-6 (1839).
Ceylon.

Labidura indica.

Forficula (Pygidicrana) indica Hagenb. MS.; Burm., Handb. Ent., ii, 751 (1838).

Forficula (Forficesila) indica DeHaan, Verh. Nat. Gesch. Ned. Bezeit., Orth., 240 (1842).

Forficula indica Stål, Eug. Resa, Zool. Ins., 300 (1858).

Labidura indica Dohrn, Stett. Ent. Zeit., xxiv, 320-21 (1863).

Forficula geniculata Stål, Öfv. k. Vet. Akad. Förh., xii, 349 (1855).
Java.

Labidura lithophila.

Labidura lithophila Scudd., Bull. U. S. Geol. Surv. Terr., ii, 259-60.
Colorado [fossil].

Labidura marginella.

Forficula marginella Cost., Att. R. Accad. Sc. Napoli, iv, Zool., 50-1 pl., figs. 1, 2 (1839).

Forficula (Labidura) marginella Fisch. Fr., Orth. Eur., 66-7, pl. 6, figs. 2, 2a (1853). Europe.

Labidura plebeja.

Labidura plebeja Dohrn, Stett. Ent. Zeit., xxiv, 284 (1863).

Java.

Labidura quadrispinosa.

Labidura quadrispinosa Dohrn, Stett. Ent. Zeit., xxiv, 311 (1863).

E. Indies.

Labidura riparia.

Forficula riparia Pall., Reis., II, Anh. 30 (1773); *Ib.*, Voyages, Nouv. ed. VIII, 155-56 (1794); Goeze, Ent. Beytr., I, 735 (1777).

Forficula riparia Fisch. Wald., Ent. Russ., IV, 46 (1846).

Labidura riparia Dohrn, Stett. Ent. Zeit., xxiv, 313-16 (1863).

Forficula pallipes Fabr., Syst. Ent., 270 (1775); *Ib.*, Spec. Ins., I, 341 (1781); *Ib.*, Mant. Ins., I, 225 (1787); *Ib.*, Ent. Syst., II, 5 (1793); Goeze, Ent. Beytr., I, 736 (1777); Gmel., Linn. Syst. Nat., I, IV, 2040 (1788); Oliv., Encycl. méth., VI, II, 468 (1792).

? *Forficula dentata* Fabr., Syst. Ent., 270 (1775); *Ib.*, Sp. Ins., I, 341 (1781); *Ib.*, Mant. Ins., I, 224 (1787); *Ib.*, Ent. Syst., II, 3 (1793); Goeze, Ent. Beytr., I, 736 (1777); Gmel., Linn. Syst. Nat., I, IV, 2039 (1788); Oliv., Encycl. méth., VI, II, 468 (1792); Thunb., Act. Soc. Reg. Scient. Ups., IX, 52 (1827).

Forficula gigantea Fabr., Mant. Ins., I, 224 (1787); *Ib.*, Ent. Syst., II, 1-2 (1793); Gmel., Linn. Syst. Nat., I, IV, 2039 (1788); Vill., Linn. Ent., IV, 373 (1789); Oliv., Encycl. méth., VI, II, 466 (1792); Latr., Hist. Nat. Crust. Ins., XII, 90 (1804); *Ib.*, Gen. Crust. Ins., III, 82 (1807); *Ib.*, Nouv. Dict. Hist. Nat., XII, 8 (1817); Charp., Horæ Ent., 67 (1825); Dufour, Ann. Sc. Nat., XIII, 345-46, pl. 19, figs. 1-3 (1828); Phil., Orth. Berol., 5 (1830); Gêne, Monogr. Forf., 8-9 (1832); Brullé, Hist. Nat. Ins., IX, 28, pl. 1, fig. 1, 1a-b (1835); Brullé, Webb, Hist. Nat. Canar., II, II, 75 (1835-42); Ramb., Faun. Ent. Andal., II, 3-4 (1838); Schaum, Peters, Reise Mozamb., II, 107 (1853).

Labidura gigantea Leach, Edinb. Encycl. Am. Ed., VIII, 707 (1816); *Ib.*, Zool. Misc., III, 99 (1817); *Ib.*, Sam. Ent. Comp., 217 (1819); Steph., Brit. Ent. Mand., VI, 8-9 (1835).

Forficula (Labidura) gigantea Fisch. Fr., Orth. Eur., 65-6, pl. 6, figs. 1, 1a-f (1853).

Forficesila gigantea Serv., Ann. Sc. Nat., xxii, 33 (1831); Ib., Rev. méth. Orth., 6 (1831); Ib., Orth., 23-4, pl. 1, figs. 2, 2a (1839); Fisch. Wald., Ent. Russ., iv, 44-5, pl. 1, figs. 1*, 1** (1846); Luc., Expl. Alg., iii, 3-4 (1846); Fieb., Lotos, iii, 252-53 (1853); Ib., Syn. Eur. Orth., 69-70 (1854); Friv., Orth. Hung., 45-6 (1867); Glov., Ill. N. Am. Ent., Orth., pl. x, figs. 2, 2a (1872).

Forficula (Forficesila) gigantea Burm., Handb. Ent., ii, 751 (1838); DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 240 (1842).

Forficula bilineata Herbst, Fuessl. Archiv. Ins., vii-viii, 183, pl. 49, fig. 1 (1788); Ib., Fuessl., Arch. Hist. Ins. 170, pl. 49, fig. 1, (1794).

Forficula maxima Vill., Linn. Ent., i, 427, pl. 2, fig. 53 (1789).

Forficula bidens Oliv., Encycl. méth., vi, ii, 466-67 (1792).

Forficula crenata Oliv., Encycl. méth., vi, ii, 467 (1792).

Forficula erythrocephala Fabr., (nec Oliv.) Ent. Syst., ii, 4 (1793).

? *Forficula flavipes* Fabr., Ent. Syst., ii, 2-3 (1793).

Psalis morbida Serv., Ann. Sc. Nat., xxii, 35 (1831); Ib., Rev. méth. Orth., 8 (1831).

Forficula (Forficesila) bivittata Klug. MS.; Burm., Handb. Ent., ii, 751-52 (1839).

Forficula (Forficesila) suturalis Burm., Handb. Ent., ii, 752 (1839).

? *Forficula bicolor* Fisch. Wald., Ent. Russ., iv, 42 (1846).

? *Forficula (Apterygida) bicolor* Fisch. Fr., Orth. Eur., 76 (1853).

Forficula Fischeri Motsch. MS.; Fisch. Wald., Ent. Russ., iv, 354 (1846).

Forficesila Fischeri Fisch. Wald., Ent. Russ., iv, 354-55, pl. 33, fig. 1 (1846).

Forficula (Forficesila) affinis Guér., Sagra, Hist. Phys. Cuba, An. Art., 330-32, pl. 12, figs. 2, 2a (1857).

Forficesila xanthopus Stål, Ofv. k. Vet. Akad. Förh., xii, 348-49 (1855).

Forficula xanthopus Stål, Eug. Resa, Zool. Ins., 300-1 (1858).

Forficula amurensis [ined.] Motsch., Bull. Soc. imp. Mosc., xxxii, ii, 499 (1859); Ib., Cat. Ins. Amour., 13 (1860).

———. Savigny, Descr. de l'Égypte, Planches Orth., pl. 1, figs. 1^a, 1^b, 1^c, 1^d, 1^e, 2¹, 2², 3¹, 3², 3³, 3⁴, 3⁵ (1809-13).

There is a Labidura in the collection of the American Entomological Society (No. 54) which apparently belongs to this species, but with forceps of a remarkable character. They are as long as the

abdomen (8 mm.) depressed, laminate, perfectly straight, entirely simple and tapering apically to a blunt point.

The entire Old World, whence it has spread into nearly all parts of the western hemisphere.

Labidura rufescens.

Forficula rufescens Pal.-Beauv., Ins. Afr. Amér., ii, 35, pl. Orth. 1, fig. 2 (1805).

Forficesila rufescens Serv., Orth., 24-5 (1839). W. Africa.

Labidura Servillei.

Labidura Servillei Dohrn, Stett. Ent. Zeit., xxiv, 316-17 (1863).

E. India.

Labidura tarsata.

Forficula tarsata Westw., Proc. Zool. Soc. Lond., v, 129 (1837).

Labidura tarsata Dohrn, Stett. Ent. Zeit., xxiv, 311-12 (1863).

Manilla.

Labidura terminalis.

Forficesila terminalis Serv., Orth., 25 (1839).

Mauritius.

Labidura tertiaria.

Labidura tertiaria Scuddl., Bull. U. S. Geol. Geogr. Surv. Terr., Ser. 2, 447-49 (1876); *Ib.*, *ib.*, ii, 259 (1876). Colorado [fossil].

Labidura Tomis.

Chelidura Tomis Kol., Melet. Ent., v, 74, pl. 17, fig. 6a-b (1846).

Forficula Tomis Fieb., Lotos, iii, 254 (1853); *Ib.*, Syn. Eur. Orth., 71 (1854).

Forficula Helmanni Kitt., Bull. Soc. imp. Nat. Mosc., xxxii, iv, 438-39, pl. 7, figs. 1-2 (1849).

Forficula elongata Eversm. (nec Fabr.), Bull. Soc. imp. Nat. Mosc., xxxii, 123 (1859). Armenia.

I place Kolenati's and Kittary's species together on the authority of Fieber. I have not been able to consult Kolenati's plate or description, and do not know the insect in nature.

Labidura trispinosa.

Labidura trispinosa Dohrn, Stett. Ent. Zeit., xxiv, 310-11 (1863).

E. India.

Labidura vicina.

Forficesila vicina Luc., Expl. Alg., iii, 5-6, pl. 1, figs. 2, 2a-e (1846).

Labidura vicina Dohrn, Stett. Ent. Zeit., xxiv, 318-19 (1863).

N. Africa, India, E. Indies.

Mecomera brunnea.

Mecomera brunnea Serv., Orth., 54 (1839). Cayenne.

Nannopygia Gerstæckeri.

Nannopygia Gerstæckeri Dohrn, Stett. Ent. Zeit., xxiv, 60-61 (1863). Ceylon.

Neolobophora bogotensis.

Neolobophora bogotensis Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 282 (1875); *Ib.*, Ent. Notes, iv, 36 (1875). Bogota.

Neolobophora volsella.

Neolobophora volsella Scudd., Proc. Bost. Soc. Nat. Hist., xviii, 237-58 (1876). Mexico.

Opisthocosmia armata.

Opisthocosmia armata DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 243, pl. 23, fig. 12 (1842).

Opisthocosmia armata Dohrn, Stett. Ent. Zeit., xxvi, 80-1 (1865). Sumatra.

? Opisthocosmia bicuspis.

Forficula bicuspis Stål, Eug. Resa, Zool. Ins., 301 (1858). Java.

Opisthocosmia centurio.

Opisthocosmia centurio Dohrn, Stett. Ent. Zeit., xxvi, 79-80 (1865). Luzon.

Opisthocosmia ceylonica.

Labia ceylonica Motsch., Bull. Soc. imp. Nat. Mosc., xxxvi, iii, 4 (1863).

Opisthocosmia ceylonica Dohrn, Stett. Ent. Zeit., xxvi, 83 (1865). Ceylon.

Opisthocosmia forcipata.

Forficula forcipata DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 242, pl. 23, fig. 11 (1842.)

Opisthocosmia forcipata Dohrn, Stett. Ent. Zeit., xxvi, 81 (1865). Sumatra.

Opisthocosmia insignis.

Forficula insignis Hagenb. MS.; DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 243, pl. 23, fig. 14 (1842).

Opisthocosmia insignis Dohrn, Stett. Ent. Zeit., xxvi, 81-2 (1865). Java.

Opisthocosmia longipes.

Forficula longipes DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 242, pl. 23, fig. 13 (1842).

Opisthocosmia longipes Dohrn, Stett. Ent. Zeit., xxvi, 81 (1865). Sumatra.

Opisthocosmia tenella.

Forficula tenella Hagenb. MS.; De Haan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 243 (1842).

Opisthocosmia tenella Dohrn, Stett. Ent. Zeit., xxvi, 82 (1865).

Java.

Opisthocosmia vigilans.

Forficula vigilans Stål. Ofv. k. Vet. Akad. Förh., xii, 350 (1855); Ib., Eug. Resa, Zool. Ins., 302-3 (1858).

Opisthocosmia vigilans Dohrn, Stett. Ent. Zeit., xxvi, 82 (1865).

Java.

Psalis americana.

Forficula americana Pal.-Beauv., Ins. Afr. Amér., x, 165, pl. Orth. 14, fig. 1 (1817).

Psalis americana Serv., Ann. Sc. Nat., xxii, 35 (1831); Ib., Rev. méth. Orth., 8 (1831).

Forficesila americana Serv., Orth., 22 (1839); Wood, Ins. Abroad, 280-81, fig. 140 (1874).

Labidura americana Dohrn, Stett. Ent. Zeit., xxiv, 319-20 (1863).

W. Indies, Central America and Northern S. America.

Psalis bengalensis.

Labidura bengalensis Dohrn, Stett. Ent. Zeit., xxiv, 312-13 (1863).

Bengal.

Psalis gagatina.

Forficula (Psalis) gagatina Klug MS.; Burm., Handb. Ent., ii, 753 (1838).

Labidura gagatina Dohrn, Stett. Ent. Zeit., xxiv, 320 (1863).

Porto Rico.

Psalis procera.

Forficula (Psalis?) procera Burm., Handb. Ent., ii, 753 (1838).

Forficula (Forficesila) distincta Guér., Sagra, Hist. Phys. Cuba, An. Art., 329-30, pl. 12, figs. 1, 1a-b (1857).

Forficesila elegans Stål, Ofv. k. Vet. Akad. Förh., xii, 348 (1855).

W. Indies, Central America and Northern S. America.

Psalis thoracica.

Forficesila thoracica Serv., Orth., 22-3 (1839).

Cayenne.

Pygidicrana angustata.

Pygidicrana angustata Dohrn, Stett. Ent. Zeit., xxiv, 56 (1863).

Ceylon.

Pygidicrana bivittata.

Pygidicrana bivittata Erichs., Schomb. Reis. Guiana, 579-80 (1848); Dohrn, Stett. Ent. Zeit., xxiv, 48 (1863).

Guiana.

Pygidicrana caffra.

Pygidicrana caffra Dohrn, Stett. Ent. Zeit., xxviii, 343-44 (1867).
Caffraria.

Pygidicrana Cumingi.

Pygidicrana Cumingi Dohrn, Stett. Ent. Zeit., xxiv, 54-5 (1863).
Ceylon.

Pygidicrana Dæmeli.

Pygidicrana Dæmeli Dohrn, Stett. Ent. Zeit., xxx, 233-34 (1869).
N. Australia.

Pygidicrana eximia.

Pygidicrana eximia Dohrn, Stett. Ent. Zeit., xxiv, 49-50 (1863).
N. India.

Pygidicrana Kallipygos.

Pygidicrana Kallipygos Dohrn, Stett. Ent. Zeit., xxiv, 53 (1863).
E. India.

Pygidicrana liturata.

Forficesila liturata Stål, Ofv. k. Vetensk. Akad. Förh., xii, 347-48 (1855).

Pygidicrana liturata Dohrn, Stett. Ent. Zeit., xxiv, 57 (1863).
Caffraria.

Pygidicrana marmoricrura.

Pygidicrana marmoricrura Serv., Orth., 20 (1839); Dohrn, Stett. Ent. Zeit., xxiv, 51 (1863).

Forficula (Pygidicrana) marmoricrura deHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 239-40 (1842).
Java.

Pygidicrana Nietneri.

Pygidicrana Nietneri Dohrn, Stett. Ent. Zeit., xxiv, 53-4 (1862).
Ceylon.

Pygidicrana notigera.

Pygidicrana (sic!) notigera Stål, Eug. Resa, Zool. Ins., 299 (1858).

Pygidicrana notigera Dohrn, Stett. Ent. Zeit., xxiv, 52 (1863).

Brazil.

Pygidicrana ophthalmica.

Pygidicrana ophthalmica Dohrn, Stett. Ent. Zeit., xxiv, 55-6 (1863); Ib., ib. xxviii, 344 (1867).
Australia.

Pygidicrana pallidipennis.

Forficula (Pygidicrana) pallidipennis DeHaan, Verh. Nat. Gesch. Ned. Bezitt., Orth., 210, pl. 23, fig. 8 (1842).

Pygidicrana pallidipennis Dohrn, Stett. Ent. Zeit., xxiv, 50-1 (1863).
Borneo.

Pygidicrana picta.

Pygidicrana picta Guér., Mag. Zool., VIII, pl. 236, fig. 1 (1838); Ib.,
Voy. Favorite, 70-71, pl. 236, fig. 1 (1838); Dohrn, Stett. Ent. Zeit.,
XXIV, 50 (1863). India.

Pygidicrana siamensis.

Pygidicrana siamensis Dohrn, Stett. Ent. Zeit., XXIV, 51-2 (1863).
Siam.

Pygidicrana valida.

Pygidicrana valida Dohrn, Stett. Ent. Zeit., XXVIII, 344 (1867).
Burmah.

Pygidicrana vitticollis.

Forficula vitticollis Stål, Ofv. k. Vet. Akad. Förh., XII, 350 (1855).
Pylicrana (sic!) *vitticollis* Stål, Eug. Resa, Zool. Ins., 299-300
(1858).

Pygidicrana vitticollis Dohrn, Stett. Ent. Zeit., XXIV, 55 (1863)
China.

Pygidicrana v-nigrum.

Pygidicrana v-nigrum Serv., Ann. Sc. Nat., XXII, 31 (1831); Ib.,
Rev. méth. Orth., 4 (1831); Ib., Orth., 19-20, pl. 1, fig. 1, 1a-b
(1839); Dohrn, Stett. Ent. Zeit., XXIV, 47-8 (1863).

Forficula (*Pygidicrana*) *v-nigrum* Burm., Handb. Ent., II, 751
(1838). Brazil.

Pyragra fuscata.

Pyragra fuscata Serv., Ann. Sc. Nat., XXII, 34 (1831); Ib., Rev.
méth. Orth., 7 (1831); Ib., Orth., 32, pl. 1, fig. 4, 4a-c (1839).

Guiana.

Sparatta nigrina.

Sparatta nigrina Stål, Ofv. k. Vet. Akad. Förh., XII, 350 (1855);
Ib., Eug. Resa, Zool. Ins., 307 (1858); Dohrn, Stett. Ent. Zeit.,
XXVI, 70 (1865). Brazil.

Sparatta pelvimetra.

Sparatta pelvimetra Serv., Orth., 52-3 (1839); Dohrn, Stett. Ent.
Zeit., XXVI, 68-9 (1865). Brazil.

Sparatta plana.

Forficula (*Apachys?*) *plana* Ill. MS.; Burm., Handb. Ent., II, 752
(1838).

Sparatta plana Burm., Germ. Zeitschr. f. Ent., II, 81 (1840);
Dohrn, Stett. Ent. Zeit., XXVI, 69 (1865). Brazil, N. Grenada.

Sparatta rufina.

Sparatta rufina Stål, Ofv. k. Vet. Akad. Förh., XII, 350 (1855);
Ib., Eug. Resa, Zool. Ins., 307 (1858); Dohrn, Stett. Ent. Zeit., xxvi,
69 (1865). Brazil.

Sparatta Schotti.

Sparatta Schotti Dohrn, Stett. Ent. Zeit., xxvi, 69-70 (1865).
Brazil.

Spongophora brunneipennis.

Psalidophora brunneipennis Serv., Orth., 30-1 (1839); Dohrn,
Stett. Ent. Zeit., xxv, 418-19 (1864).

Eastern and Southern U. States, Arizona, Mexico.

Spongophora croceipennis.

Spongiphora croceipennis Serv., Ann. Sc. Nat., xxii, 31-2 (1831);
Ib., Rev. méth., Orth., 5 (1831).

Forficula croceipennis Wils., Treat. Ins., pl. 228, fig. 6 (1835).

Forficula (Spongiphora) croceipennis Burm., Handb. Ent., II, 752-
53 (1838); Guerin, Icongn. Regne Anim., 326, pl. 52, fig. 1 (184-);
Gray, Griff. An. King., pl. 104, figs. 1, 1b (1832).

Psalidophora croceipennis Serv., Orth., 30, pl. 1, figs. 3, 3a-b (1839);
Dohrn, Stett. Ent. Zeit., xxv, 418 (1864).

Forficula flavipennis Burm. [nec Fabr.], Handb. Ent., II, 752
(1838). Brazil.

Spongophora forfex.

Spongophora forfex Scudd., Proc. Bost. Soc. Nat. Hist., xviii,
259 (1876). Loc.? (probably Central America.)

Spongophora frontalis.

Psalidophora frontalis Dohrn, Stett. Ent. Zeit., xxv, 422-23
(1864). Venezuela.

Spongophora insignis.

Psalidophora insignis Stål, Ofv. k. Vetensk. Akad. Förh., XII, 349
(1855). N. Grenada.

Spongophora Lherminieri.

Psalidophora Lherminieri Serv., Orth., 29-30 (1839).

Burmeister believes this to be the same as his *flavipennis* = *S. croceipennis* (cf. Germ. Zeitsch. Ent., II, 80). Guadeloupe, Brazil.

Spongophora nigripennis.

Psalidophora nigripennis Scudd., Proc. Bost. Soc. Nat. Hist., XII,
344-45 (1869); Ib., Ent. Notes, II, 29-30 (1869). Peru.

Spongophora parallela.

Forficula parallela Westw. (nec Fabr.), Guér. Mag. Zool., pl. 178 (1838).

Forficesila longissima Wood, Ins. Abroad, 279-80, fig. 139 (1874).
Central America.

Spongophora parvicollis.

Forficula parvicollis Stål, Eug. Resa, Zool. Ins., 304 (1858).

Psalidophora parvicollis Dohrn, Stett. Ent. Zeit., xxviii, 345 (1867).
Brazil.

Spongophora prolixa.

Psalidophora parallela Dohrn [nec *Forficula parallela* Westw.]
Stett. Ent. Zeit., xxiii, 227-29, pl. 1, figs. 3, 3b (1862); Ib., ib., xxv,
418 (1864).
Mexico.

Spongophora punctipennis.

Forficula punctipennis Stål, Eug. Resa, Zool. Ins., 304 (1858).

Psalidophora punctipennis Dohrn, Stett. Ent. Zeit., xxv, 421 (1864).
S. America.

Spongophora pygmaea.

Psalidophora pygmaea Dohrn, Stett. Ent. Zeit., xxv, 421-22 (1864).
Brazil.

Spongophora quadrimaculata.

Forficula quadrimaculata Stål, Ofv. k. Vet. Akad. Förh., xii, 348 (1855).

Psalidophora quadrimaculata Dohrn, Stett. Ent. Zeit., xxv, 420-21 (1864).
S. Africa.

Spongophora stigma.

Psalidophora stigma Dohrn, Stett. Ent. Zeit., xxviii, 345 (1867).
Venezuela.

Tagalina grandiventris.

Forficula grandiventris Blanch., Voy. Pole Sud, Zool., iv, 349-50, Orth., pl. 1, fig. 1 (1853).

Tagalina grandiventris Dohrn, Stett. Ent. Zeit., xxiv, 46 (1863).
Isle St. George (Arch. Salom).

Tagalina Semperi.

Tagalina Semperi Dohrn, Stett. Ent. Zeit., xxiv, 45 (1863).

Luzon.

Thermastris brasiliensis.

Forficula brasiliensis Gray, Griff. An. Kingd., xv, 184, pl. 78, fig. 2 (1832).

Thermastris brasiliensis Dohrn, Stett. Ent. Zeit., xxiv, 62 (1863).

Forficula (Pygülicrana) opaca Burm., Handb. Ent., II, 751 (1838).

Forficula aspera Stål, Eng. Resa, Zool. Ins., 300 (1858). Brazil.

Thermastris chontalia.

Thermastris chontalia Scudd., Proc. Bost. Soc. Nat. Hist., XVIII, 258-59 (1876). Nicaragua.

Thermastris Dohrnii.

Thermastris Dohrnii Scudd., Proc. Bost. Soc. Nat. Hist., XVII, 280-81 (1875); lb., Ent. Notes, IV, 34-5 (1875). Peru.

Thermastris Saussurei.

Pygülicrana Saussurei Dohrn, Stett. Ent. Zeit., XXIII, 225-26, pl. 1, fig. 2 (1862).

Thermastris Saussurei Dohrn, Stett. Ent. Zeit., XXIV, 63 (1863). Mexico.

Typhlolabia larva.

Forficula? larva Phil., Zeitschr. Ges. Naturw., XXI, 219-21 (1863). Chili.

Note. In the List of Genera the name

FORFICULARIA.

was overlooked. It was given to a fossil form by Weyenbergh in 1869 (*loc. cit.*), differing, as restored by Weyenbergh, in no respect from *Forficularia*.

