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ENTOMOLOGICAL SOCIETY OF ONTARIO.

The forty-first annual meeting of the Society was held in its new quarters in the Public Library Building, Queen's Avenue, London, on Wednesday and Thursday, Oct. 26th and 27th. The chair was taken by the President, Prof. W. Lochhead, of the Ontario Agricultural College at Guelph. Among those present were: Dr. James Fletcher and Mr. Arthur Gibson, Central Experimental Farm, Ottawa; Mr. H. H. Lyman, Montreal; Mr. John D. Evans, Trenton; Mr. J. B. Williams, Toronto; Mr. G. E. Fisher, Burlington; Prof. Creelman, President of the Ontario Agricultural College; Miss M. V. Dunlop, Woodstock; Mr. J. A. Balkwill, Dr. Bethune, Prof. Bowman, Prof. Dearness, Mr. S. B. McCready, Principal Merchant, Mr. John Law, Mr. Jacobs (of the "Farmer's Advocate"), Mr. W. E. Saunders, Mr. W. R. Thompson, Dr. Woolverton, Mr. M. Westland, Miss Bapty, Miss Hotson, and others, London; Prof. Wickham, of the University of Iowa, Iowa City; Mr. T. N. Willing, Chief Inspector of Weeds for the Department of Agriculture, Regina, N.-W. T. The first morning session was occupied by a business meeting of the Council.

In the afternoon the President began the proceedings by congratulating the Society on their fine new quarters in the Public Library Building, which afford ample space for the books and collections, and which are in every way more commodious and accessible. He paid a feeling tribute to the memory of the late J. Alston Moffat, who died in February last, and who had been the faithful Curator and Librarian for fourteen years.

The reports of the Directors on the injurious insects of the year were then read; they all remarked upon the scarcity of insect life during the season and the consequent immunity throughout the Province from serious insect depredations. Mr. Fisher gave an account of some experiments

made during the past year with the lime and sulphur wash as a remedy for the San Jose scale. This led to an interesting discussion upon this and other methods of controlling insect and fungous injuries.

Mr. T. N. Willing gave an account of the operations in the Northwest Territories against noxious weeds and insects. They had fifty field inspectors at present, and the number would soon be increased; the Government had taken up the work with great energy, and the farmers as a rule were heartily co-operating. Much of their success was due to the addresses given by Dr. Fletcher in an annual tour through the country. Museums of Natural History had been started in two or three places; the children in the schools were being taught Nature Study, and efforts were being made to procure observers of the migrations of birds in various localities.

Dr. Fletcher bore testimony to the excellence of the work which was being done in the Northwest, and to the high appreciation which the farmers there had for scientific work and teaching. He spoke in warm terms of the energy and ability of Mr. Willing, his practical knowledge and scientific attainments, and the success attending his efforts among the farmers, in the schools, and in the Natural History Society.

Prof. Lochhead read his paper on the Injurious Insects of the year in Ontario, dealing with those affecting the farm, the orchard and the garden, which was followed by an animated discussion regarding many of the insects referred to. After the reading of the reports from the Montreal and Toronto Branches, the meeting adjourned.

In the evening a public meeting was held in the Normal School, and was well attended, notwithstanding the inclemency of the weather. The chair was taken by Dr. Fletcher. Prof. Lochhead read his presidential address on "Recent Progress in Entomology," and was followed by Prof. Wickham, of the University of Iowa, who gave a very interesting lecture on "The Great Basin in the Western States and its Entomological Features." This was illustrated by a large number of beautiful lantern slides, most of them made by the author from his own photographs. Both addresses were highly appreciated by the audience, which included many pupils from the Collegiate Institute and Normal School.

On the second morning the election of officers took place, with the following result:

President—J. D. Evans, C. E., Trenton.

Vice-President—Dr. James Fletcher, Ottawa.

Secretary—W. E. Saunders, London.

Treasurer—J. A. Balkwill, London.

Directors: Division No. 1—C. H. Young, Hurdman's Bridge.

Division No. 2—C. E. Grant, Orillia.

Division No. 3—J. B. Williams, Toronto.

Division No. 4—G. E. Fisher, Burlington.

Division No. 5—S. B. McCready, London.

(The ex-Presidents of the Society are Directors ex-officio.)

Librarian and Curator—Rev. C. J. S. Bethune, London.

Auditors—W. H. Hamilton and F. A. Stuart, London.

Editor of the "Canadian Entomologist"—Rev. Dr. Bethune, London.

Editing Committee—Dr. Fletcher, Ottawa; H. H. Lyman, Montreal;

J. D. Evans, Trenton; Prof. Lochhead, Guelph; G. E. Fisher, Burlington; J. B. Williams, Toronto.

Delegate to the Royal Society—J. D. Evans, Trenton.

Delegates to the Western Fair—J. A. Balkwill and W. E. Saunders, London.

Finance Committee—J. Dearness, J. A. Balkwill and Dr. Bethune.

Library and Rooms Committee—Messrs. Balkwill, Bethune, Bowman, Dearness and Saunders, London.

After some discussion, it was decided that the Editing Committee should arrange a series of articles of a popular or practical character in the CANADIAN ENTOMOLOGIST, beginning with the January number.

WILLIAM H. ASHMEAD, M. A., D. Sc., of the United States National Museum, Washington, D. C., was unanimously elected an Honorary Member of the Society.

Papers were read on a variety of subjects by Dr. Fletcher, Dr. Lyman, Prof. Lochhead, Messrs. Gibson, Williams, Evans, Cockle, Stevenson, and Prof. Wickham. These will be published in full in the Annual Report of the Society to the Legislature of Ontario.

An agreeable feature of the meeting was the large number of rare and remarkable specimens brought by many of the members. These were examined and discussed with great interest.

ON SOME NEW COLEOPTERA, INCLUDING FIVE NEW GENERA.

BY THOS. L. CASEY, ST. LOUIS, MO.

The principal motive in publishing the present paper is the desire to fulfill a promise made to Rev. J. H. Keen, several years ago, to write a description of an apparently new and very interesting Staphylinid discovered by him in British Columbia. For one reason or another I was compelled to defer this work, but having now an opportunity to comply with the wishes of my valued friend and correspondent of many years, the present occasion is made available to draw up a little paper, containing in addition a number of novelties received from various collectors from time to time.

BRYOTHINUSA, n. gen.—Staphylinidæ.

Body moderately slender, exactly parallel, rather depressed on the upper surface, the integuments dull, very finely and densely sculptured, the pubescence short, abundant and semi-erect; head strongly deflexed, fully as wide as long, the sides parallel and arcuate, the base very broad and inserted within the apex of the prothorax; eyes small, anterior, flat, elongate-oval, consisting of ten to twelve coarse convex facets; infralateral carina wholly wanting; epistoma broadly arcuate; labrum about twice as wide as long, rather prominent, broadly rounded at tip; antennæ long and slender, very feebly incrassate distally, the joints loosely joined, the first and second elongate and subequal, the second as long as the third and fourth combined; mentum very large, flat, trapezoidal, maxillary lobe long, slender, hooked at tip, loosely serrate within; labial palpi slender, 3-jointed, the maxillary large and well developed, densely hairy; prothorax at apex as wide as the head, gradually and moderately narrowed thence to the base, the sides nearly straight, the hypomera delimited from the pronotum by a very fine beaded edge, broad in the middle and narrowing arcuately to base and apex; scutellum very large, triangular; elytra shorter than the prothorax, the suture not beaded; abdomen more than half as long as the body, parallel, the segments not impressed at base; metasternum very short, the episternum large, gradually and rapidly narrowed anteriorly; legs rather short and stout; coxæ very large, the intermediate acitabula apparently well defined throughout; tibiæ pubescent and finely subspinulose; tarsi short and rather thick, 4-4-5-jointed, the first four joints of the posterior diminishing gradually and slightly in length, the fifth not quite as long as the preceding three combined.

This genus differs from *Thinusa* in its very long antennæ, broad hypomera, small eyes, and in many other characters. The type is the following:

B. Catalinae, n. sp.—Pale yellowish-brown in colour throughout the body, legs and antennæ, the abdomen feebly clouded with piceous from rather before the middle nearly to the apex, extremely minutely and closely punctulate throughout, the pubescence pale and rather conspicuous; head rather large, flat or broadly impressed above, the antennæ half as long as the body, slender, just visibly incrassate distally, bristling throughout with short and rather stiff erect pubescence, the tenth joint distinctly longer than wide, the eleventh about as long as the preceding two combined, gradually and acutely conoidal; prothorax distinctly wider than long, broadly, feebly concave toward the middle throughout the length, except at the apical margin; base superposed over the base of the elytra, the latter flat, biobliquely truncate at tip, as wide as the prothorax and four-fifths as long, the sides parallel; abdomen strongly margined, equal in width to the elytra. Length, 2.15 mm.; width, 0.43 mm.

Catalina Island, California.

A number of specimens were recently sent to me by Mr. C. F. Baker, said to have been taken on the beach between high and low tide marks.

EUNONIA, n. gen.—Staphylinidæ.

Body broad, subdepressed, small in size, the integuments polished, very coarsely, rather sparsely sculptured, inconspicuously pubescent; head and prothorax much narrower than the hind body; head wider than long, the eyes convex, coarsely faceted, occupying the entire sides from near the antennæ to the basal constriction, which extends entirely across the very broad base, the ocelli very small, basal, widely separated and adjoining the constriction; antennæ well developed, nearly half as long as the body, rather slender, bristling with long sparse setæ, the three outer joints enlarged, forming a loose club; mentum large; maxillary palpi rather stout, the first joint small, second a little shorter than the third, the latter stout, the fourth as long as the third, obliquely inserted, conical, becoming aciculate at tip; epistomal suture between the antennæ deeply excavated, except the oblique lateral parts before the supra-antennal prominences, where it is fine; prothorax wider than the head, parallel and broadly rounded at the sides; elytra large; abdominal border broad, strongly inclined; legs rather short and slender; coxæ rather small; tarsi moderate, the first four joints very short, and together longer than the last, the first shorter and more oblique than the second.

Not closely allied to any other genus of the Omalini. This genus is represented at present by a single species, as follows :

E. Keeniana, n. sp.—Black, the upper surface, except the abdomen, with a piceous tinge, especially noticeable on the elytra ; legs dark rufopiceous, the antennæ black ; surface highly polished ; head coarsely but not densely punctate, the prothorax coarsely, closely and vermicularly sculptured, with a smooth elevated median line, and, midway between this line and each side, two irregular, slightly elevated and smooth areas ; elytra wider than long, three-fourths wider and longer than the prothorax, the sides diverging from the moderately-rounded humeri, which are not very widely exposed at base, the surface very coarsely, not densely punctate, feebly impressed toward the humeri, narrowly along the sutural bead toward base, more broadly behind the middle, this latter impressed area having on each elytron a small patch adjoining the sutural bead where the sculpture becomes subobsolete ; abdomen as long as the elytra, and, at the base, equally wide, strongly ogival, transversely convex, polished and impunctate, though rather coarsely micro-reticulate. Length, 2.25 mm. ; width, 0.95 mm.

British Columbia (Metlakatla). Rev. J. H. Keen.

I also have this species, which it gives me pleasure to dedicate to its discoverer, labeled "Queen Charlotte Islands."

LEPTOREMUS, n. gen.—Anthicidæ.

Body subcylindric, closely punctured throughout, the sculpture concealed by the dense decumbent vestiture ; erect hairs wanting ; head wider than the prothorax, the eyes extremely large, feebly sinuate anteriorly, occupying the entire sides of the head, convex, prominent, very coarsely faceted, the facets strongly convex ; tempora subobsolete ; neck rather long, about two-thirds as wide as the head ; epistoma long, the suture obscure ; maxillary palpi slender, the fourth joint much longer than the third, narrow, elongate-suboval, the apex obtusely pointed and obliquely truncate ; antennæ long, gradually attenuate, the apex very slender, joints from the third compressed, rather strongly serrate within, the serratures gradually becoming very feeble distally, the last joint very slender, still more attenuate subabruptly in less than apical half and about two-thirds longer than the penultimate ; prothorax narrow and elongate, broadly constricted at apex, finely margined at base ; scutellum small, broadly rounded ; abdomen with five free segments equal in length ; metasternum long ; mesosternum very narrowly separating the coxæ, with the episterna large and equilatero-triangular ; legs rather long, slender, the

tibiæ clothed with short decumbent hairs, with some small inclined spinules intermingled externally; terminal spurs small, slender; tarsi long, filiform; basal joint of the posterior as long as the entire remainder, the penultimate simple; claws well developed, feebly subdentate within near the base.

This genus differs from *Mastoremus* in the structure of the eyes, tempora, maxillary palpi, tarsi and vestiture of the entire body and legs, as may readily be observed on comparing the descriptions. The genus does not closely resemble *Bactrocera*, Lec., under which name specimens were distributed by Mr. Wickham, the latter genus having the eyes much smaller, with the tempora rather long, but strongly converging behind them to the neck, which is very much narrower. The prothorax in *Bactrocera* is transverse, gradually narrowed from near the apex to the base, the surface clothed sparsely with long erect hairs, not at all concealing the sculpture, which consists of lunate granuliform elevations having their concavities outward. The antennæ are not serrate, and the last joint is as long as the four preceding combined. *Bactrocera concolor*, from Lower California, is 7.0 x 2.0 mm. in size. The vestiture is long and sparse throughout, shorter and less erect on the elytra. Of *Leptoremus* I have seen only the type species, which may be described as follows:

L. argenteus, n. sp.—Moderately slender, convex, black, the legs scarcely paler, the antennæ red-brown, densely, not very coarsely, roughly punctured, the surface in great part concealed by dense and closely decumbent silvery-white hairs, short or moderate in length and rather coarse, without trace of erect hairs at any point; head less than two-thirds as wide as the elytra, the eyes separated anteriorly by very much less than their own width, their inner outline obliquely rounded, the tempora behind them extremely short and subtransversely rounded to the neck, with the margin adjoining the eyes somewhat prominent; antennæ rather more than three-fourths as long as the body, rather broad and strongly compressed basally, the second joint very small and transverse, the first moderate, three to five similar and having the form of a right-angled triangle, less than twice as long as wide, seventh to ninth more than twice as long as wide, less serrate and gradually longer, tenth fully three times as long as wide; prothorax distinctly narrower than the head, and evidently longer than wide, subparallel, the sides broadly rounded anteriorly, the base two-fifths wider than the apex before the constriction;

elytra parallel, obtusely rounded behind, the humeri widely exposed at base, the sides nearly straight, the humeral angles well rounded, distinctly more than twice as long as wide. Length, 5.8-6.5 mm.; width, 1.6-1.8 mm.

California (Indio,—22 feet below sea level). Mr. H. F. Wickham.

The sexual characters of the male are not observable in any of the specimens before me. In well preserved individuals there is a feeble maculation of small spots, in which the vestiture is still denser, but of the same character; on the elytra these small rounded spots are remotely spaced in rather regular series.

LIORBAULIUS, n. gen.—Anthicidæ.

Body small in size, convex, with narrow head and prothorax and inflated hind body, the elytra largely smooth, punctureless and polished, with a strong transverse opaque impression near the base; head with the eyes well developed and noticeably before the middle, semicircularly rounded at base, the neck very narrow; last joint of the maxillary palpi moderate in size, very obliquely securiform; antennæ slender, more or less strongly and gradually incrassate distally; prothorax very convex, circularly rounded at the sides, constricted between basal third and fourth, the constriction confined to the sides; basal part feebly expanding to the base and much narrower than the rounded anterior part; apical collar well developed, much wider than the neck; elytra strongly convex behind the subbasal pubescent impression; legs moderately long, slender, the basal joint of the hind tarsi as long as the remainder, the penultimate joint slightly dilated, strongly lobed, deeply grooved above and angularly marginate at tip, the last joint inserted near its base; mesosternum expanded greatly toward the sides of the body, forming a broad polished and wholly sculptureless plate, rounded and fimbriate at the sides, the setæ sparse, the plate with a beaded edge throughout; epimera, at the sides, and episterna in front of the polished plate, both very narrow and dull in lustre, finely sculptured; anterior coxal cavities open behind.

As may be inferred from these characters, this genus is allied to *Baulius*, but differs wholly in the general facies and sculpture of the body, form of the head and absence of the fringe of setæ at the sides of the expanded mesosternal plate; it also differs in having a few series of rather long, very sparse stiff setæ on the elytra, these being wholly wanting in *Baulius*. The species known to me, which will include also the *Anthicus dromedarius* of Laferté, may be described as follows:

L. subtropicus, n. sp.—Pale red-brown throughout, the elytra black in apical three-fourths, except an oblique pale line, on each at apical third, not attaining the suture or sides and of the usual pale tint; antennæ blackish distally; pubescence wanting on the head, except an erect tactile seta at each side between the eye and the neck, fine sparse, decumbent and inconspicuous on the prothorax, dense decumbent, silvery and conspicuous in the strong transverse depression near the base of the elytra, and also similar but sparser on the posterior oblique pale lines, elsewhere wanting; head longer than wide, convex, coarsely but not closely punctate throughout; antennæ half as long as the body; prothorax narrower than the head, longer than wide, more finely punctate, the punctures dense and longitudinally confluent anteriorly, sparse posteriorly, the basal border strong, parallel with the basal margin; elytra twice as wide as the prothorax, but less than three times as long, moderately inflated posteriorly, the apex rather acutely ogival. Length, 2.6 mm.; width, 0.73 mm.

Texas (Brownsville). Mr. Wickham.

The male sexual characters are rather complex, the fifth ventral being broadly emarginate in circular arc, the surface adjoining convex and beveled toward the middle, the sixth segment also broadly emarginate, with a small cusp at the middle, the intromittent spicule very slender, the lateral members large and irregular in form. This species is closely allied to *dromedarius*, Laf.

L. Lulingensis, n. sp.—Similar to the preceding in general form, size, nature of the sculpture and coloration, the head much more sparsely and indistinctly punctate, the eyes much smaller and less prominent, and the antennæ rather more incrassate distally, somewhat more than half as long as the body; prothorax similar, but with the punctuation sparse and inconspicuous throughout; elytra notably more inflated behind the middle and narrower at the humeri, twice as wide as the prothorax and two and one-half times as long, the oblique pale lines at posterior third obsolete. Length, 2.4 mm.; width, 0.65 mm.

Texas (Luling).

This species is of the same general type as the preceding, but differs very distinctly in its narrower form, more posteriorly inflated elytra and sparser sculpture. It is described from the male.

L. spectans, n. sp.—Smaller, the hind body shorter and more inflated; body and legs black, the antennæ paler toward base, the elytra with a transverse narrow pale band following the subbasal impression, the tarsi

also pale; surface brightly polished throughout, the head small, longer than wide, convex, sparsely and longitudinally strigilate throughout except toward base and on the front, not distinctly punctate; eyes moderate in size, but extremely convex and prominent; antennæ half as long as the body, very strongly and gradually incrassate distally through the outer five joints, which are also strongly compressed; prothorax extremely convex, narrower than the head and somewhat longer than wide, finely and sparsely punctate throughout; elytra about one-half longer than wide, more than twice as wide as the prothorax, strongly and gradually inflated posteriorly, finely and sparsely punctate and subglabrous throughout, even in the subbasal impression, where the punctures are simply larger but still sparse, elsewhere very minute and forming series, some of which bear the long tactile setæ, and others small, more decumbent hairs, all extremely sparse; mesosternal plate beaded anteriorly and posteriorly, but not at the sides; basal joint of the hind tarsi longer than the remainder. Length, 1.9 mm.; width, 0.62 mm.

Texas (Brownsville). Mr. Wickham.

Notably distinct from the two preceding species in sculpture and general appearance.

L. fronteralis, n. sp.—Of the same type as the preceding, but minute in size and much more slender, less convex, glabrous, dark piceo-rufous, the antennæ black distally, the elytra piceous-black, with a broad yellow band at basal fifth; legs paler, flavo-piceous; head very sparsely punctate, with a few longitudinal rugæ anteriorly toward the eyes, the latter very prominent; antennæ very slender, scarcely half as long as the body, rapidly and strongly incrassate and compressed near the tip; prothorax much narrower than the head and elongate, finely, sparsely punctate; elytra nearly twice as long as wide, more than twice as wide as the prothorax, gradually and but feebly inflated posteriorly, not distinctly punctured except some rather large but feeble and very sparse punctures in the subbasal impression, which is much feebler than usual. Length, 1.65 mm.; width, 0.45 mm.

Mexico (Frontera in Tabasco). Mr. C. H. T. Townsend.

The small size and slender form of this species will readily admit of identification when discovered.

EUVACUSUS, n gen. (Anthicidæ).

Body broader and more convex than in *Vacusus*, the integuments opaque and densely sculptured, the elytra without trace of erect tactile setæ; tempora prominent and rounded behind the eyes; occiput broadly

and strongly impressed in the middle; last joint of the maxillary palpi strongly securiform, moderate in size; antennæ long, incrassate distally; mesosternum greatly dilated toward the sides of the body, the polished mes-epimera—between it and the elytral margin—very narrow and tumid; legs and tarsi as in *Anthicus*.

The above name is proposed for a species differing greatly from *Vacusus* in general facies, sculpture and vestiture, in its more obliquely securiform palpi, longer antennæ, prominent tempora, very conspicuously impressed occiput, and still more dilated mesosternum, the mes-epimera in *Vacusus* being much broader and flat. In *Euvacusus* the greatly dilated mesosternum is separated from the episterna by a strongly marked suture, and the latter extend from the sides of the body nearly to the axial line in front of the expanded mesosternum and are sculptured like the latter, the epimera being brightly polished and sculptureless. The middle coxæ are much more widely separated than in *Anthicus*, and are emarginated by a strong external trochantin. The prosternum before the coxæ is very much more longitudinally convex than in *Vacusus*.

E. Coloradanus, n. sp.—Moderately stout and rather convex, opaque, dark piceous-brown throughout, the prothorax slightly and the legs much paler and more rufous; antennæ dusky, much longer than the head and prothorax, the outer five joints larger than the preceding five; head wider than long, strongly convex, finely and not closely punctured, the interspaces finely strigilato-reticulate; base broadly truncate; eyes moderate, very prominent, at rather more than their own length from the base; tempora as prominent laterally as the eyes; prothorax narrower than the head, slightly longer than wide; sides strongly, evenly rounded anteriorly, thence converging and broadly sinuate to the base; punctures stronger and dense; collar strong; basal margin feebly defined; surface almost evenly convex; elytra not quite twice as long as wide, very slightly wider behind the middle than at base, almost twice as wide as the prothorax; humeri rounded, widely exposed at base; apex obtusely rounded; sculpture consisting of larger nude punctures, with fine intermediate punctulation bearing the pubescence, which, like that of the pronotum, consists of short fine decumbent and very uniform pale hairs; legs moderate. Length, 2.4 mm.; width, 0.75 mm.

Colorado (Leadville). Mr. H. F. Wickham.

The type of this very interesting species is a male, the intromittent spicule being slender, subparallel, abruptly narrowed near the apex, and thence very slender to the tip, which is very feebly swollen, the upper surface of the wider portion longitudinally excavated except toward base.

ANTHICUS, Payk.

A. floridanus, n. sp.—Moderately stout, notably depressed, pale yellowish-brown, the head feebly clouded toward the middle; elytra blackish, each with two large pale spots, the anterior transversely and unevenly oval at basal fifth, extending from the side margin to inner fifth or sixth, the posterior rather behind apical fifth, somewhat elongate-oval, extending from near the side margin to inner fourth or fifth; legs pale; antennæ dusky, paler toward base; pubescence pale, rather short, moderately abundant and suberect on the elytra, inconspicuous elsewhere; head rather wider than long, broadly, rectilinearly truncate at base; eyes well developed, moderately prominent, at much less than their own length from the base, the tempora rounded, short and less prominent; surface moderately convex, shining, rather coarsely, moderately closely punctate toward the sides, the median parts impunctate; prothorax evidently narrower than the head, barely as long as wide, the sides strongly and rather narrowly rounded very near the apex, thence converging to the base, sinuate for a short distance from the latter; punctures anteriorly moderate and not dense, gradually becoming densely scabrous in fully basal half; surface feebly impressed along the median line from the basal border almost to the extreme apex; elytra long, parallel, about twice as long as wide, not quite twice as wide as the prothorax; rather finely and closely punctate, the sides nearly straight, obtusely rounded at tip; legs rather long and slender; basal joint of the hind tarsi fully as long as the remainder. Length, 2.8 mm.; width, 0.9 mm.

Florida (Lake Worth). Mr. Kinzel.

A fine species, readily distinguishable from most of the other pale-spotted species by its more depressed form, peculiar sculpture of the prothorax, larger eyes and many other characters; the antennæ are of the usual type but rather slender, and the median line of the head toward base is only very obsoletely impressed.

A. plectrinus, n. sp.—Moderately stout and convex, rather dull in lustre, somewhat dark red-brown, the legs and antennæ concolorous, the elytra black; punctures rather small and very close-set throughout, the vestiture short but abundant, whitish and conspicuous; head wider than long, broadly arcuato-truncate at base, the occiput very feebly impressed at the middle; eyes small, convex and prominent, at fully twice their own length from the base; tempora slightly diverging behind them, so that just before the moderately-rounded basal angles the width is about as great as

across the eyes; antennæ rather slender, as long as the head and prothorax, feebly incrassate distally; prothorax barely as long as wide, a little wider than the head, broadly, evenly convex, with distinct basal margin, the sides denticularly and conspicuously prominent at apical fifth or sixth, thence converging and nearly straight to the base; elytra parallel, the sides feebly arcuate; apex obtusely subtruncate, the humeral angles well rounded, not quite twice as long as wide, about three-fourths wider than the prothorax, and three times as long; surface almost evenly convex, feebly flattened toward the suture, the subbasal tumidity wholly obsolete. Length 3.0 mm; width, 0.9 mm.

Colorado (Colorado Springs). Mr. H. F. Wickham.

This remarkable species will form an exception in the particular arrangement of species proposed by the writer for our representatives of *Anthicus* (Ann. N. Y. Acad. Sci., VIII., p. 687), in that, being one of the larger species, it must be placed, because of its general structure and affinities, near the very small *convexus* at the end of the table. The head is finely, very closely punctured, with a narrow entire impunctate line, expanding anteriorly, where it seems to be slightly tumid.

DINOCLÆUS, Csy.

D. porcatus, n. sp.—Small in size and rather narrowly suboblong-oval, deep black, partially clothed with narrow pointed decumbent white scales, a broad pronotal area but little more than half as wide in front as at base, subdenuded, the elytra very coarsely furrowed, the furrows coarsely and deeply but not closely punctured, the first and second deeper and more coarsely punctured from near the base to apical third, the third and fourth generally from basal fifth to near the middle, these more coarsely punctured parts subdenuded of vestiture, the fifth and sixth also more denuded, especially behind the middle; prothorax very strongly dentate and prominent laterally at apical fourth, the sides converging and more or less sinuate thence to the base; disk very coarsely and closely punctate; beak more or less prominent along the median line. Length from the eyes to the elytral apex, 7.0–8.5 mm.; width, 2.75–3.25 mm.

Utah (Ogden). Mr. Hugo Soltau.

Allied to *denticollis*, but smaller and narrower, and with the vestiture sparser, the elytra more coarsely and deeply furrowed, and more coarsely punctate, the elytral intervals alternately more prominent and convex, but only conspicuously so along the more coarsely punctate and denuded parts. The lateral prominences of the prothorax are even more developed than in *denticollis*.

D. interruptus, n. sp.—Elongate-oval, more convex, the surface smoother, more densely clothed with slender decumbent pointed scales, generally white in colour, but variegated on the elytra with numerous small patches, in which the scales become brown in colour, smaller in size and sparser, these patches more coarsely punctate, and forming in general an oblique line from the humeri to the middle near the suture, and thence obliquely outward and posteriorly, meeting a broad variegated area extending longitudinally from the humeri nearly to the apex; beak not more prominent along the middle; prothorax only moderately denticulate and prominent at the sides near apical fifth, the subdenuded central area moderately narrowed anteriorly, the punctures somewhat coarse but sparse; elytra not furrowed, having series of small punctures which become large in the subdenuded patches. Length, 8.2–9.5 mm.; width, 3.3–3.9 mm.

Utah. Mr. Weidt.

This species somewhat resembles the southern Californian *alboves-titus*, but is smaller in size and more convex, with the alternate elytral intervals not more convex and conspicuous, as they are in that form, and with the punctuation throughout less coarse.

D. Mexicanus, n. sp.—Elongate-oval, large in size, rather strongly convex, black, densely clothed with decumbent whitish scales of the usual elongate pointed form, not variegated in colour and not distinctly denuded in patches on the elytra; beak large and well developed, very coarsely punctate, not prominent along the middle; prothorax much wider than long, the dentiform lateral prominences at apical fourth moderate, the punctures coarse and rather close-set, the median subdenuded area very broad, moderately and sinuously narrowed anteriorly; elytra not grooved, having feebly impressed series of moderately small and deep punctures, the first and second from the suture usually coarser, and having a more denuded appearance from near the base to behind the middle, the alternate intervals just visibly more convex and more densely clothed as a rule. Length, 14.5–15.5 mm.; width, 6.0–6.5 mm.

Mexico (Guerrero). Mr. Baron.

Resembles *molitor*, Lec., to some extent, and was confused with that species by Mr. Champion. It is rather broader and less convex in form, with the scales denser and much more persistent than in *molitor*, and the prothorax is much broader and less elongate. In *molitor* the vestiture does not entirely conceal the integuments, and is very easily denuded. The two species are quite different.

YUCCABORUS, Lec.

Y. lentiginosus, n. sp.—Rather narrowly elongate-oval, convex, black, shining, the elytra dull and with many of the punctures of the intervals surrounded by a pale yellowish-white modification of the surface, the punctures along each side of the pronotum also so affected; beak slender, parallel, straight, four-fifths as long as the prothorax, the antennæ inserted just beyond the middle, where there is a slight lateral swelling; punctures coarse and subconfluent; antennæ thick, the glabrous polished base of the club extending beyond the middle on the compressed sides, but confined to the basal parts on the narrow sides, the scape attaining the eyes, which are coarsely granulated, the individual facets very convex; prothorax not quite as long as wide, the sides rounded; apex much narrower than the base, transverse, feebly sinuate at the middle, the base rectilinearly truncate; punctures coarse, deep and rather close-set, polygonally crowded toward the sides; elytra a fourth wider than the prothorax, and more than twice as long, the sides parallel and straight, converging and rounded in apical third; humeri rather widely exposed at base, the angles rounded; striæ not very coarse, feebly impressed, coarsely and strongly punctured toward base, finely toward apex, the intervals each with a single uneven series of fine punctures; abdomen strongly and sparsely but only moderately coarsely punctate, strongly impressed in the middle near the base in the male; legs moderate, shining, punctate. Length, 8.5–9.5 mm.; width, 3.0–3.7 mm.

Texas (Brownsville). Mr. H. F. Wickham.

There is no described species in our fauna closely allied to this, as may be gathered from the table previously published by the writer (Ann. N. Y. Acad. Sci., VI., 688), but it belongs with *grossus* rather than with *frontalis*, though very much smaller than that species, and less coarsely sculptured. The singular small pale spots of the elytra are a distinctive feature; they are irregularly distributed over the entire surface.

NOTES.

I have recently received a Guatemalan species of *Centrinus*, which cannot be distinguished from *lineellus*, described by LeConte from a unique, said to have been taken in California. While drawing up a redescription of this species (Ann. N. Y. Acad. Sci., VI., p. 592), it was impossible to avoid a suspicion of some mistake in the locality, because of the tropical appearance of the species and its apparent lack of harmony

with the Pacific coast Barid fauna in general. It now seems probable that, like *Xystropus Californicus*, of Horn, the *Centrinus lineellus*, of Le Conte, is an adventitious importation from Central America, which should be removed from the list of our native Coleoptera.

The genus *Plectromodes*, Csy. (l. c. VIII., p. 829), is a synonym of *Sternechus*, Sch., previously supposed to be entirely tropical, and the genus *Copturodes*, Csy. (l. c. IX., p. 669), is a synonym of *Cylindrocop-turus*, published by Heller two years before.

COLEOPHORA TILIÆFOLIELLA, CLEM.

BY W. D. KEARFOTT, MONTCLAIR, N. J.

This species was named by Clemens* from the larval habit and food-plant only. He did not publish a description of the moth, nor, so far as I am aware, has any one else bred it, until very recently Mr. Arthur Gibson rediscovered the larvæ on basswood.

The case is of the so-called pistol-shape, of about same size and hardly differing from the well-known pistol-case on apple†, excepting that the side wings are less expanded or more closely appressed.

The following is a description of the moth:

Head, thorax and antennæ-basal brushes very light brown or pale fawn, face and under side of head whitish; a collar of nearly white scales between head and thorax. Palpi whitish at base and beneath, gradually becoming pale brown at tips. Antennæ annulated with white and light brown.

Fore wing: Ground-colour at base and inner fourth of costa same shade as thorax, beyond and gradually increasing in intensity, overlaid with darker brown, becoming smoky black at apex. A line of white scales along middle of costa, and parallel, beneath a shorter white line, below this a few scattered white scales. Another narrow white line on costa, before apex. Continuing around outer margin to about the middle of the long dorsal cilia, the white scales of this marginal line project into the cilia. Cilia brown, gradually becoming smoky-black at apex. The tips of costa-cilial scales white.

Hind wing, cilia and under side of both wings dark smoky fuscous. Abdomen above dark shining fuscous, anal tuft, under side and legs whitish.

Exp., 14 mm. One ♀ specimen bred by Mr. Arthur Gibson, Ottawa, Canada. Larval case collected on basswood, June 21, 1904; issued June 30, 1904.

*Proc. Ento. Soc. Phila., Vol. I., p. 80, 1861.

†*C. malivorella*, Riley.

NOTES ON THE LOCUSTIDÆ OF ONTARIO.

BY E. M. WALKER, B.A., M.B., TORONTO.

The Locustidæ (Tettigonidæ, Rehn), comprise the long-horned or green grasshoppers, katydids and camel or stone crickets. They have for the most part a southern distribution, and hence are but poorly represented in Ontario, except in the south-western part, to which the majority of the species are confined.

Five sub-families are represented in the province, and twenty-six species have been found, many of these being now recorded for the first time. All, or nearly all, of these occur in the south-west, but the number of species rapidly diminishes northward, and in the boreal zone not more than six or seven species are to be found, only one or two of these being at all characteristic of the north. Along Lake Erie the genera *Orchelimum* and *Xiphidium* are well developed, there being eight species of the former, only one of which, *O. vulgare*, extends north of the south-western peninsula. To this region is also confined the sole representative of the sub-family Decticinae, *Atlanticus pachymerus*. There are doubtless also unrecorded species in the south-west, especially in the genera *Ceuthophilus* and *Xiphidium*.

In the preparation of the following notes I am indebted to Messrs. Blatchley and Caudell for their kind assistance in the determination of puzzling species.

Excellent tables for the determination of all but one species of our Locustidæ are to be found in Blatchley's "Orthoptera of Indiana," in the 27th Annual Report of the Dept. of Geology and Natural Resources of Indiana, 1902.

Sub-family PHANEROPTERINÆ.

1. SCUDDERIA TEXENSIS, Saussure-Pictet. The Texas Katydid.

Scudderia Texensis, Sauss -Pict, Biol. Cent. Amer. Orth, 1897, 328.

Scudderia curvicauda, Bl., Proc. Ind. Acad. Sci., 1893, 99.

Measurements: Length of body, ♂ 25 mm., ♀ 28 mm.; of pronotum, ♂ 6.2 mm., ♀ 6.5 mm.; of hind femora, ♂ 29 mm., ♀ 28.5 mm.; of tegmina, ♂ 39 mm., ♀ 38.5 mm.; of ovipositor, 8 mm.; width of tegmina, ♂ 8.2 mm., ♀ 8.5 mm.

This fine large species is quite common in south-western Ontario, but seems to be confined to that part of the province. I found it upon tall coarse grasses and sedge growing in open marshes. Blatchley says it is probably less arboreal than any other species of katydid.

Localities : Pt. Pelee, Aug. 8, 1901; Arner, Essex Co., Aug. 9, 1901; Sarnia, Aug. 14, 1901; Walpole Id., River St. Clair, Aug. 13, 1901.

2. *SCUDDERIA CURVICAUDA*, De Geer. The Curve-tailed Katydid.

Locusta curvicauda, De G., Mem. pour. serv. à l'hist. des ins., iii., 1773, 446.

Phaneroptera curvicauda, Burm., Handb. Ent., ii., 1838, 690.

Phaneroptera angustifolia, Harr., Ins. Inj. to Veg., 1841, 129.

Scudderia curvicauda, Stål., Rec. Orth., ii., 1874, 30.

Scudderia angustifolia, Scudd., Ann. Rep. Ent. Soc. Ont., 1892, 67.

Scudderia furculata, Bl., Proc. Ind. Acad. Sc., 1893, 100.

This katydid varies considerably in size, according to locality. Blatchley's measurements of Indiana specimens are too large for Ontario specimens, except those from the south-west.

The species diminishes in size northwards, as seen from the following measurements :

	Length of body. mm.	Length of pronotum mm.	Length of body. mm.	Length of tegmen. mm.	Length of ovipositor mm.	Width of tegmen. mm.
Arner... ♂	24	6	27	36		9
♀	23	5.6	27	34.5	8	7.5
Toronto. ♂	22.5	5	24.5	31.5		7.5
♀	21	5.4	24.5	31.0	7	7.3
Severn { ♂	20-21.5	4.7-5.3	20-24	25.3-31		6.3-7
River. { ♀	21.8	5	21.5	28	7	6

I have but a single pair from Arner, so that their measurements may not be typical for that locality, but they are probably nearly so. I give the total range in size of the Severn River specimens, as I have but 4 ♂'s and 1 ♀, and of the former two are considerably smaller than the other two.

The Arner specimens were taken in company with *S. Texensis* and other Locustidæ from the long grass and sedge of an open marsh bordering a small creek. The Toronto specimens all come from trees and bushes in more or less open, partly wooded country at High Park, or from the borders of woods. The soil here is sandy everywhere, and the growth is

chiefly of white and red pine, oak and sassafras, while the open grassy places are largely grown up with New Jersey tea (*Ceanothus Americana*), sweet-fern, great quantities of lupine, bush-clover, *Desmodium*, and many kinds of Compositæ. The two larger specimens from the Severn were taken under very similar conditions, but the other three came from an open bog, forming a small lake which had become filled in and was covered with a thick tangle of the dwarf Cassandra (*Chamedaphne calyculata*).

The day note of this katydid has been represented by Scudder by the syllable "brwi." The only song that I have heard was produced during the afternoon, and is composed of a rather harsh note lasting about one-third of a second, and repeated three or sometimes four times in succession. Each note ends quite abruptly before the next is produced. The night song is described by Scudder as consisting of a "repetition ordinarily eight times, of a note which sounds like *tchw*. It is repeated at the rate of five times in three-quarters of a second, making each note half the length of the day note."

Localities: Arner, Essex Co., Aug. 9, 1901; Toronto, August; Tobermory, Bruce Co., Aug. 24, 1901; Severn River, Muskoka, Aug. 12, 13, 17, 1898.

3. SCUDDERIA PISTILLATA, Brunner. The Northern Katydid.

Scudderia pistillata, Brunn. Mon. der Phan., 1878, 240.

Measurements: Length of body, ♂ 20 mm., ♀ 19 mm.; of pronotum, ♂ 5.2 mm., ♀ 5 mm.; of hind femora, ♂ 21 mm., ♀ 19.5 mm.; of tegmina, ♂ 30 mm., ♀ 26 mm.; of ovipositor, 6.5 mm.; width of tegmina, ♂ 9 mm., ♀ 8 mm.

This is a northern species, much the most abundant in northern Ontario, but I have not taken it south of Toronto. It is common on bushes, tall herbs and grass on the borders of low woods and along fence rows.

Its note is less harsh than that of *curvicauda*. The night song somewhat resembles "zeep, zeep," repeated about five or six times at the rate of about twenty-three times in five seconds. Late in the afternoon, while the sun is still shining brightly, this night song is begun, but at this time it is more rapid, the notes being produced at the rate of about five per second, and repeated seven or eight times. The true day song consists of a single note lasting about three-quarters of a second, somewhat like "kzrrt!"

The mature Katydid's appear about the third week in July, and remain until about the first of October.

This species is usually taken for *Amblycorypha oblongifolia* by amateur collectors, and I have little doubt it was, at least in part, the species referred to under that name by Caulfield in his "Sketch of Canadian Orthoptera" (Ann. Rep. Ent. Soc. Ont., 1887).

Localities: Toronto, Aug.; Lake Simcoe, July 18 to Sept. 8; Southampton, Aug. 20, 1901; Bruce Peninsula, Aug. 22-27, 1901; Burke's Island, Lake Huron, Aug. 27, 1901; Dwight, Muskoka, Aug.-Sept., 1902; Algonquin Park, Aug.-Sept., 1902-03. I have also taken it on the Isle d'Orleans, Quebec.

4. *SCUDDERIA FURCATA*, Brunner. The Fork-tailed Katydid.

Scudderia furcata, Brunn., Mon. der Phan., 1878, 239.

Scudderia angustifolia, Bl., Proc. Ind. Acad. Sc., 1893, 102.

Phaneroptera curvicauda, Riley, Ann. Rep. Ins. Mo. 1874, 164.

Measurements: Length of body, ♂ 20 mm., ♀ 19 mm.; of pronotum, ♂ 4.6 mm., ♀ 4.9 mm.; of hind femora, ♂ 21 mm., ♀ 21.3 mm.; of tegmina, ♂ ♀ 28.5 mm.; of ovipositor, 7 mm.; width of tegmina, ♂ 6 mm., ♀ 6.2 mm.

This species seems to be quite generally distributed throughout Ontario, as far north as Lake Nipissing, but is commoner in the southern part. It frequents trees and bushes about the edges of woods and thickets on both dry and marshy ground, but most often on the latter. The earliest date upon which I have taken the imago is Aug. 7, at Point Pelee, but it may appear somewhat earlier. It remains until about the end of September.

The song of *S. furcata* is very like that of *pistillata*. Riley says: "The shrill of the male is by no means so loud as that of the oblong-winged katydid, *Amblycorypha oblongifolia*, De Geer, in which its sound is always drowned in the woods. It consists of a softer *zeep, zeep*, sometimes uttered singly, but generally thrice in succession. The call is occasionally responded to by a faint chirp from the females, produced by the stretching out of their wings as for flight, and is as often heard in the day as at night."

Localities: Pt. Pelee, Aug. 7, 1901; Arner, Essex Co., Aug. 9, 1901; Rondeau, Sept. 14, 1899; Sarnia, Aug. 12, 1901; Bruce Peninsula, Aug. 23, 24, 1901; Toronto, Sept.; Lake Simcoe, Sept. 6-21;

Severn River, Aug. 12, 1898; Dwight, Muskoka, Aug. 10, 1903; North Bay, Sept. 12, 1900.

I have also taken this species at Agassiz, B. C., where it was common on Sept. 9, 1897.

5. *AMBLYCORYPHA OBLONGIFOLIA*. The Oblong-winged Katydid.

Locusta oblongifolia, De G., Mem. pour serv. à l'hist. des ins., III., 1773, 445.

Phylloptera oblongifolia, Harr., Ins. Inj. to Veg., 1862, 159.

Amblycorypha oblongifolia, Brunn., Mon. der Phan., 1878, 266.

Measurements: Length of body, ♂, 23 mm., ♀, 28 mm.; of pronotum, ♂, 6.25 mm., ♀, 6.5 mm.; of hind femora, ♂, 31 mm., ♀, 28 mm.; of tegmina, ♂, 38 mm., ♀, 33.5 mm.; of ovipositor, 11.5 mm.; width of tegmina, ♂, 13 mm., ♀, 11 mm.

This fine large katydid is confined to the southern part of the Province, where it is common. I have seen one specimen taken at Toronto, but it must be very rare there. It is common from Hamilton westward along Lake Erie to the St. Clair River.

I found it common on shrubs and tall herbs on the borders of an open marsh at Arner, Essex Co. The marsh was bordered by low hills, thickly covered with hardwood. At Point Pelee immature examples were plentiful upon weeds in openings in a low wood, and on the Niagara River, near the Glen, I found it in numbers on tall weeds and grass in a pasture near a small wood. Blatchley says: "*Oblongifolia* frequents the shrubbery and flowers of the golden-rod and other Compositæ along fence rows and the edges of thickets and woods, especially in damp localities." (Orth. Ind., p. 351.)

The specimens taken on the Niagara River were found by tracing the note of the male to its source. In this way I observed the insect in the act of stridulating. The note is very harsh and scraping in character, and is usually of about three-fifths of a second's duration. At a little distance it sounds something like "*kizizik!*" I have heard it at night and in the afternoon while the sun was still shining.

In Caulfield's "Preliminary List of the Orthoptera of Canada" (Ann. Rep. Ent. Soc. of Ont., 1887, 70) this species is reported as being common at Ottawa and Toronto, and as being found in Ontario generally, to north of Lake Superior. This is without doubt an error, the reference being to another species, probably *Scudderia pistillata*, which I have

often seen labelled "*Phylloptera oblongifolia*" in local collections. The true *oblongifolia* is distinctly confined to the south-western portion of Ontario, and although I have never collected at Ottawa nor at Montreal, from which it is also reported by Caulfield, I consider it extremely improbable that the species has ever been taken so far north.

Localities: Point Pelee, Aug. 8, 1901; Arner, Essex Co., Aug. 9, 1901; Rondeau, Sept. 14, 1899; Walpole Id., River St. Clair, Aug. 13, 1901; Niagara River, Aug. 14, 1904, Sept. 25, 1898; Hamilton, Sept. 23, 1898; Toronto.

Sub-family PSEUDOPHYLLINÆ.

6. CYRTOPHYLLUS PERSPICILLATUS, L. The True Katydid.

Gryllus perspicillatus, L., Cent. Ins. Rar., 1763, 15.

Cyrtophyllus perspicillatus, Brunn., Handb. der Ent., II., 1838, 697.

Platyphyllum concavum, Harr., Ins. Inj. Veg., 1862, 158.

Cyrtophyllus concavus, Scudd., Bost. Journ. Nat. Hist., VII., 1862, 444.

This well-known insect has been but once reported from Ontario by Caulfield (Ann. Rep. Ent. Soc. Ont., 1887, 70). It was taken at London at an electric light. I have been told that it is common at Niagara, but I have never met with it anywhere in the Province, although I am pretty sure I heard its song at Morpeth, Kent Co., on Lake Erie, Sept. 7, 1899. I had often heard it before at Yonkers, N. Y.

(To be continued.)

THE BEE-GENUS *APISTA*, AND OTHER NOTES.

BY T. D. A. COCKERELL, BOULDER, COLORADO.

The genus *Apista* was proposed by F. Smith in 1861, to contain the species *Apista opalina*, Sm., which was described from a single female from Ega, Brazil. So far as I know, the specimen is still unique. In Dalla Torre's Catalogue the genus is placed just after *Melipona*, which is the reason, no doubt, why Schrottky says nothing about it in his work on the solitary bees of Brazil. Ashmead, in his tables, places it in the Andrenidæ, and I have no doubt that this is its correct position. The following notes are from the type in the British Museum:

Looks very much like a Ligurian (or Italian) honey-bee; the fasciation of the abdomen, to which Ashmead refers, is inconspicuous, consisting merely of a dense ciliar fringe on the hind margins of segments 1 to 4, very narrow and pale yellowish in colour; the abdomen is testa-

ceous with a greenish reflection; pygidial plate large and triangular; area of metathorax triangular, distinguished by absence of pubescence (the rest of metathorax covered with long dense hair), and minutely sericeous; hind trochanters and femora with a large curled floccus; basal joint of hind tarsi broad; tegulae red; wings hairy, venation peculiar; marginal cell obliquely truncate; first recurrent nervure joins second submarginal cell *near its base*; second recurrent meets *third* transverso-cubital nervure; second submarginal cell very broad, slightly larger than third; basal nervure falling some distance short of transverso-medial; joints of palpi short; flagellum red beneath, except first joint, last joint very shiny above.

The following notes relate to various insects:

Dione vanilla.

Some years ago I took a brightly-coloured form of this butterfly at San Diego, California. As it was obviously different from the insect of our Southern States, I took occasion to look it up in the British museum. I found that the Californian insect was the true *vanilla*, as found in Mexico and the West Indies; while the darker and somewhat differently marked insect familiar in the United States is a very good sub-species, to which the name *passiflora*, Abb.-Sm., is applicable.

Hemileuca sororia, Hy. Edw.

I recently saw the type of this in the American Museum of Natural History. It is remarkably large and dark, with roseate hind wings. I do not think the New Mexico insect (*oliviae*) is conspecific.

Lasioptera ephedrae, Ckll.

Dr. D. T. MacDougal showed me galls of this species on *Ephedra trifurca*, which he collected on the sand dunes at San Felipe Bay, Lower California.

Lecanium capense, Walker.

The type in the British Museum shows that this is a *Diaspid*. I do not recognize the species, but it resembles a *Pseudoonidia*.

Orthezia Americana, Walker.

The type is missing from the British Museum, and a note where it should be states that it has been missing since Aug. 1874. Under these circumstances it will be quite impossible to recognize the species.

Pogonomyrmex occidentalis, Cresson.

Going west I first noticed the nests of this ant at Ruleton, Kansas. They probably are as indicative of the beginning of the arid region as anything one could mention.

DESCRIPTION OF A NEW CULEX.

BY JOHN A. GROSSBECK, PATERSON, N. J.

Culex siphonalis, sp. nov.—♀. Head brown, occiput covered with pale yellow scales; antennæ brown, basal joint and two following ones testaceous; proboscis pale brown, with dark brown scales scattered over the surface, covering the apical fourth; palpi dark brown, with minute terminal joint oval in form, pointed at the apex and slightly spiny. Mesonotum covered with pale yellow and brown scales at the sides and with a median vitta wholly of brown scales, the pale yellow scales sometimes forming a narrow border to this vitta; scutellum brown, with yellowish-brown bristles on the posterior margin; metanotum evenly brown; pleura brown, clothed with patches of dirty white scales; halteres yellowish-white, black at the apex. Abdomen blackish-brown, with pale yellowish basal bands and extremely narrow apical ones on the posterior three segments, irregularly merging into the brown, becoming diffused at the sides until beneath are mixed brown and white scales, the latter predominating. Legs with coxæ yellowish-white; femora with mixed black and white scales, wholly yellowish beneath and with a white dot at the knee; tibiæ blackish-brown, sprinkled with whitish scales; tarsi black, except the first tarsal joint, this like the tibiæ, narrowly white banded at the base in the anterior and mid feet, save the fifth joint in the anterior one, posterior feet broadly white banded basally; claws slender, uniserrated; wings hyaline, petiole of first submarginal cell about half as long as this cell. Length, 5 mm.

♂.—Palpi brownish, with a pale band in the centre of the basal joint and at the base of the two terminal joints. Claws all uniserrated. The bands of the abdomen very broad, mixed with brown scales and tending to cover the entire surface in the apical segments. Petiole of first submarginal cell almost as long as this cell. Length, 6 mm. Otherwise as in the female.

This species closely resembles *Culex cantans*, but differs in the median thoracic stripe, the much more slender claws, its darker colour and smaller size. The larvæ are obviously different from those of *cantans*, possessing a very long anal siphon, which has suggested the name.

Described from two females and five males bred from larvæ collected at Livingston Park, New Jersey.

Types in the collection of the New Jersey Experiment Station.

A HYMENOPTEROUS PARASITE OF THE GRAPE-BERRY
MOTH, *EUDEMIS BORTANA*, SCHIF.

BY WILLIAM H. ASHMEAD, M.A., D. SC.

TRIBE V.—Campoplegini.

Genus *Thymaris*, Forster.

Thymaris Slingerlandana (Fig. 9), new species—♀. Length, 4.5 mm.; ovipositor about one-third the length of the abdomen. Black, subopaque, the head and thorax very finely, microscopically punctate, with a sparse, glittering, white pubescence, which is denser or more distinct on the lower part of the face, the cheeks, the pleura and the metanotum; ocelli pale or opalescent; palpi whitish; scape and pedicel of antennæ, the tegulæ, the front and middle coxæ and trochanters, the hind trochanters except at base of first joint, and all tarsi, except as hereafter noted, honey-yellow, the hind coxæ, base of hind trochanters, a spot at base of hind tibiæ

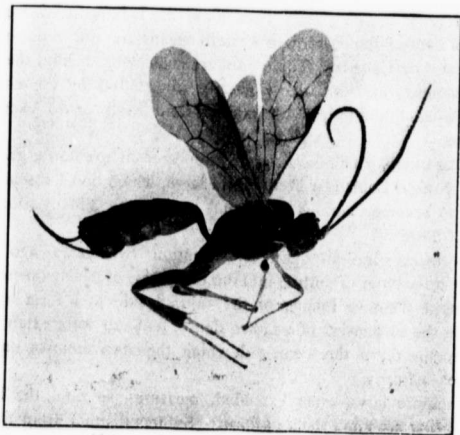


FIG. 9.

outwardly and at apex, and the apices of hind tarsal joints 1, 2 and 3 and joints 4 and 5 entirely, black; rest of legs pale ferruginous; wings hyaline, iridescent, the stigma and veins light brown; metathorax

incompletely areolated, the areola alone complete or distinct pentagonal; abdomen subfusiform, longly petiolated, about one-half longer than the thorax, subcompressed towards apex and entirely black, except the ventral fold, at apex of the petiole and on segments 2 and 3, which is honey-yellow.

Type.—No. 8124, U.S.N.M.

Host.—Lepidop. *Eudemis botrana*, Schif.

Described from two specimens bred by Prof. M. V. Slingerland, at Ithaca, N.Y., from the destructive Grape-berry Moth, *Eudemis botrana*, Schif. It resembles the European *Thymaris pulchricornis*, Brischke, but differs in sculpture, colour of antennæ and legs, and in the incompletely areolated metathorax.

THE ROSEBUD FEATHER-WING.

(*Platyptilia rhododactyla*, Schiff.)

BY MARY E. MURTFELDT, KIRKWOOD, MO.

Scarcely a season passes that some newly-introduced, pernicious insects from across the eastern or western oceans are not reported in the United States or Canada. These immigrants, leaving behind them their natural enemies, and apparently greatly invigorated by the change of climate, usually multiply with rapidity and soon prove exceedingly destructive.

Among others which have recently appeared in the flower gardens in the vicinity of St. Louis is a Pterophorid larva, which bores rosebuds and threatens to become a serious additional pest on the already sorely beset "queen of flowers."

This insect first attracted my attention two years ago by its characteristic manner of cutting into the receptacle of nearly-opened buds, which caused them to incline on the injured side and form a sort of bracket for the suspension of a rather dense, tent-like web, extending two or more inches down the stem, with which the larva incloses itself as it approaches maturity.

The mature larva, when extended, measures 10 mm., the broadest diameter being 2.5 mm., thick fusiform. Sutures distinct from their pale colour, though but slightly impressed. General colour pale greenish-yellow, with conspicuous dull red medio-dorsal stripe, most pronounced on thoracic segments, where it is supplemented by two narrower sub-dorsal red streaks. The entire surface has a woolly appearance, with short, coarse, glandular or slightly knobbed hairs, interspersed with longer

and finer ones proceeding from faintly-indicated piliferous warts. Head and legs honey-yellow, mottled and streaked with pale brown—the former small—scarcely one-half the diameter of the succeeding segments. Prolegs slender, glassy.

Pupa inclosed in slight web of very open meshes, resting on a mat of silk on surface of slightly-curved leaf or against the stem, and held in position by a fine thoracic band. It is about 8 mm. in length; sparsely hairy, very pale green, with distinct, dark green dorsal stripe and irregular fainter markings of the same colour and of dull purple or crimson; wing-sheaths outlined in dark green. Changes to gray several days before the imago appears.

The moth expands from 16 to 20 mm. Colours rather dull golden-brown, dark brown and white. These are intermingled in streaks and mottlings on the basal two-thirds of the fore wings, the apical area, of clear golden brown, being separated by a distinct triangular line of white, and margined by a fine line of dark brown, succeeded by a white one. The hind wings are lustrous, golden-brown, except the posterior "feather," which is white with a dark brown triangle near the tip. Abdomen dark brown. Legs white, banded with dark brown.

As the species is already described, these general characters are given merely to enable any one to whom the original description is not accessible to identify it.

I am indebted to my friend, Dr. C. H. Fernald, for the determination accompanied by the information that "the specific name is from two Greek words, the first of which means *rose*, and the second *fingers*," which would indicate that the rose-feeding habit of the larva was known to the original describer.

BEETLE DRIFT ON LAKE MICHIGAN.—The names of the Dytiscidæ omitted on page 295 are:

Colymbetes sculptilis, Say (1).

Ilybius confusus, Aubè (10).

Ilybius fuliginosus, Fa br . (1)

Agabus, sp. (1).

I desire to acknowledge the determinations of Mr. John D. Sherman, jr., in the Dytiscidæ, and of Mr. A. E. Schwarz in other beetles.—JAMES G. NEEDHAM.

SPINNING HABITS OF *TELEA POLYPHEMUS*.—Prof. F. M. Webster writes, with reference to his article in the May number, page 133: "The observations of Mr. Cockle (C. E., p. 100, May) are not altogether unique, as Mr. Wm. T. Davis, in the Journal of the N. Y. Entomological Society, Vol. V., pp. 42-43, records having observed a cocoon of *Telea polyphemus* attached to the side of a house, in August, about 5 inches from the ground, and also a case where a larva had spun in the forked branch of a rose-bush that had stood in the water; in both cases the cocoons were firmly attached. The same writer records the finding of a Luna cocoon spun on, and firmly attached to, the branch of a tree or shrub that had stood in the water. It thus appears that these insects do the best they can under existing circumstances, and I presume Mr. Cockle, had he been able to see the conditions when the cocoons to which he refers were spun, might also have noticed that these were unusual." [Mr. Cockle sent to the Annual Meeting of the Entomological Society of Ontario a further paper on this subject, and a quantity of cocoons showing a remarkable variety of modes of attachment, some being suspended in the same manner as *C. promethea*.—ED. C. E.]

NOTES.

MR. F. L. WASHBURN, State Entomologist of Minnesota, reports the occurrence at St. Anthony Park of the imported Alder and Willow Beetle, *Cryptorhynchus lapathi*, Linn., which was introduced in a shipment of Carolina poplars from the State of New York last spring.

MR. K. JORDAN, Zoological Museum, Tring, England, desires to draw attention to the fact that *Hyloicus* [*Sphinx*] *perelegans* has a gray form very similar to a small *H. chersis*, besides the ordinary black-backed form. Perhaps someone will breed the insect and thus ascertain whether the dichromatism is seasonal.

The Curator begs to acknowledge with grateful thanks the following gifts to the Society's collections:

From Mr. C. H. Young, Hurdman's Bridge, Ont., specimens of the imago, chrysalis and inflated larvæ of *Semiophora Youngii*, Smith, and a new species of *Hydracia*.

From Mr. A. A. Wood, Coldstream, Ont., specimens of *Ancyloxypha numitor*, Fabr., *Orthosia helva*, Grote, and *Botis generosa*, Grote and Rob.

The Curator would very much like to receive specimens of most of our Canadian insects to fill blanks in the cabinets, and to replace old and imperfect examples; all specimens should have date and locality labels attached. In many of the orders our collections are very meagre. To avoid duplication it would be well for any intending donor to send a list first of those specimens which he is willing to present to the Society.