

Sixty-one New Diptera

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POSTLERIA CZERNI. New Spc.

Male and female—Gray brown, a dark brown stripe from the ocell to the antennae, leaving only a pale narrow line by each eye. face and cheeks yellow, 1 vibrissæ, with a single row of hairs behind. Front orbital bristle equal to the hind one. Antennae darker, 3 round and mostly black, arista short, about as long as the eye, cheek deep square, head below eye narrowed in the lateral view.

Thorax and pleura brown to dark brown, Dorsum with 4 or 5 Dorso central bristles. The posterior pair longest, then gradually diminishing to the suture where it is often absent. Many setulæ, one humeral and two pair of scutellum bristles. Pleura bare except a few hairs below the disk near the one or two propleural bristles. Sternopleura on top with one bristle and a row of hairs in front of it, the whole middle bare and many bristles between the coxæ. Abdomen black. Legs: all femora swollen, much polished and deep red yellow, looking black; fore femora with top and bottom row of bristles, hind femora with no bristles. Tibea and tarsi red yellow. Hypopygium very similar to that of *P. Ruficauda* and *P. Fuscolinea*.

Holo, Allo and Paratypes. St. Paul Isle, Alaska, 10 male, 2 female. A male and female from Funk Isle, Newfoundland, differ in many ways, but until I get more males I cannot say if they are *P. Minuta* Zett. Type No. 133. Garrett coll.

VIATICA MELANDERI. New Spc.

Male and female. Hind head gray, front red yellow, face and cheeks yellow. Front fronto orbital about a quarter the length of the hind one. Antennae red yellow darkish, Arista long. 1 vibrissæ a row of hairs behind it. Thorax brownish, 4 strong dorso centrals. Scutellum yellow with the base dusky. Pleura bare except two hairs below the disk near the propleural bristle. Sternopleura on top with 2 bristles and two hairs in front of it, centrally all bare and very few bristles between the coxæ. Mid femora laterally with a row of long and short spines, mid tibia with one pre apical and 7 apical spurs, 4 of which are very long. Tarsi one, $\frac{3}{4}$ the length of its tibia with long apical spurs. Legs yellow, fore tarsi flat spatulate. Abdomen blackish, apically and ventrally yellow. Hypopygium very small.

Holo male and Allotype female, Moscow Mt., Idaho, taken by Dr. A. L. Merlander who has the Allotype. Type No. 140 in Garrett coll.

ECCOPTOMERA CALLIPUS. New Spc.

Male—Description as in *E. Americana* A and D. Hypopygium distinct, cerci large, dististyles broad, tipped with long hairs.

Holo and Allotype, Hood River, Oregon, June. Type No. 123, Garrett coll.

For four years I have endeavoured to get a male European *L. Cineraria*, but so far have only obtained females. To avoid further muddling and de-

SCANTHOLERIA MOSCOWA. New Spc.

lay I am describing the third American form which doubtless is close to the European *Cineraria*, but it is absolutely necessary to examine the Hypopygium and the armature of the hind femora before deciding. This species is as follows:

САНТОНЕРИЯ МОСКОВСКАЯ

Male and female— Colour and size as in *A. Oedemus*, but differing in the structure of the hypopygium and the hind femora: On the inner and lower side the middle half has a row of 12 strong spines set evenly apart. On the outer and lower middle half a set of 7 shorter spines. The tibia when closed lies in between the two rows. Hind tibia an even triangular swelling at the center, on the under side. (L. Czerny says that *Cineraria* has no swelling.)

Holo, Allo and Paratypes, Moscow Mt., Idaho, Sept. 16 male and 3 female. I believe Dr. C. W. Johnson and Dr. Aldrich have some in their collection as both have sent mesopisicems. Moscow Mt. is the only locality I have seen the species from. *A. Oedemus* is found all over U. S. and Canada. Paratypes as above and with Dr. A. L. Merlander. Type No. 125, Garrett coll.

SUILLIA LÆWI. New Spc.

This insect has been labeled *H. Zetterstedti* in American collections. It is very similar to that European form but is easily separated by:— Wing veins dark. Superior clasp broadly triangular; those of *Zetterstedti* are narrow finger shaped and wing veins yellow.

Holo, Allo and Paratypes from Mass., Alaska, B.C., Ore., Wash. and Idaho. 40 male and 25 female. In the collection of Dr. J. Hine, Dr. Merlander and myself. The Alaskan specimens have slightly yellow veins. Type No. 122, Garrett coll.

HELOMYZA AMERICANA. New Form.

This is *Leria serrata* F. The American form usually has less and shorter vibrissæ, less hairs behind them, and the inner clasp of the hypopygium is shorter, more evenly curved and deeper. Locality: U.S., Canada. Two or three thousand roughly examined.

AMCÆBALERIA SACKENI. New Spc.

In placing my type form of *Leria Defessa* O.S. I have used a Metatype very kindly sent me by Dr. N. Banks. In *Defessa* the exterior clasps are straight and finger like and the inner clasps are arcuate swelling evenly to a large base. In *Sackeni* the outer clasps are distinctly turned up at their tips, and the inner clasps have a large oval base, from the middle of which the inner clasp rises like a tree from the ground where the base is thin, then gradually swelling to the tip.

Holotype, male. Clarksville, N.Y. Paratype, male. Ind., Dec.; Ohio, March; Ill., May. Type No. 119, Garret coll.

Following are two new species of *Amcæbaleria*. Long, tedious descriptions are of no value because *A. Scutiflata*, *Plexipius*, *Gonea*, *Triangulata* and *Bisetata* are outwardly almost identical. The last can be easily be separated by the bristles on the mesopleura, and all have quite distinct hypopygii. When more specimens are available one might be able to get a key based on the shape of the fore tarsi and hind tarsi one, the amount and distribution of the hair on the sterno and mesopleura.

AMCÆBALERIA GONEA. New Spc.

Male— Colour as *A. Bisetata*. Hypopygium, cerci short, exterior clasps ribbon like, bare and having at their base a short curved arm directed in-

wards capped by short stout bristles. Interior clasps long ribbon like expanded at the base and the tip; the latter is rounded and has 2 or 3 rows of minute black spines at near the tip.

Monotype, Bull River, B.C., Oct. Type No. 118, Garrett coll.

AMCEBALERIA TRIANGULATA. New Spc.

Male and female similar to *Gonea*, but cerci long. Exterior clasps round shell like, the entire top set with small spines and hairs. From near the base a curved arm turns inwards, then downwards, nearly entirely covered by short black spines. Interior clasp sits on a long base; the base of the clasp itself is thin and narrow but it quickly expands and turns at right angles (upwards) to a long narrow tip; laterally it is long triangular and nearly covered on the inside with short spines.

Holo, Allo and Paratypes from Yukon, B.C.; Idaho and Wash., July to Oct. Paratypes with Dr. ~~Mex~~lander. Type No. 120, Garret coll.

AMCEBALERIA FRATERNA VAR HYALINA

The *Fraterna* group is in a very muddling state at present. I have examined a large number of specimens from as widely separated districts as California, Alaska, Ungava, Massachusetts, and Quebec. The hypopygium shows very slight variation but the colour and pilosity is extremely variable. I think the group can be fairly well covered by naming one variety, as follows. Thorax and pleura chiefly gray black, dorso centrals strong, and short hairs on the dorsum; Abdomen red yellow, hairs short and few; wings hyaline and no or very little yellow.

Holotype male, Cranbrook, B.C., Allotype female, Alaska. Many paratypes with Dr. Banks, Dr. Hine, and C. Garrett. Type No. 121.

EUDICRANA PLEXIPUS. New Spc.

This species differs in many particulars to the genus but fits better than in *Paratina* or *Empalia*. It is intermediate to the three genera. Female head dark, palpi yellowish; antennae, scrape and base yellowish, the rest yellow brown. Lateral ocelli almost touching the eye margin. Thorax nondescript yellow or pale brown with 3 pale brown vitta. Long dorsum, bristles black. Metanotum yellow. Abdomen red brown. Vents yellow; Coxae and femora yellow to brownish. Fore tarsi one shorter than its tibia. Wing glaberrone, shiny hyaline. C produced to the apex of the wing. The tip of Sc joins C beyond, and Sc 2 near the base of RS. Cell R1 very long, 5 or 6 times as long as deep; R 2-3 distad of M fork; tips of C, R, and R4 curve parallel; M forks much and Cu slightly distad of the tip of Sc; Cu forks widely divergent but short; A normal but ending about Cu fork.

Monotype female, Vancouver, B.C., March. Type No. 135, Garrett coll.

ODONTOPODA DISTINCTA. New Spc.

This is the second American species of this genus. The form of the hypopygium is so distinctive that it warrants the generic separation from *Neuratellia*.

Male—Dark black brown except proboscis, palpi, base of antennae, halteres, coxae and legs, yellow hind coxae and tips of hind femora somewhat black. Wing hyaline; tip of Sc about over the fork of Cu; Sc 2 absent; C produced nearly to the apex of the wing; base of M wanting; Cu forks distad of Rs, the forks widely divergent; hypopygium very small, almost entirely within the abdomen; all that is showing is two pairs of claw like spines.

Monotype, Agassiz, B.C., June. Type No. 138, Garrett coll.

NEURATELIA OBSCURA. New Spc.

Male—Dark brown; palpi, propleura, halteres, inferior claspers, coxæ and legs yellow. Base of antennæ brown. Hind coxæ blackish. Wings hyaline. Sc 2 proximad of mid cell R1; Cu forks slightly distad of Rs; hypopygium clasp short, somewhat similar to *N. Scitula*. Besides the three clasps on the rim there is a fourth that folds in, a broad flat black piece of chitin; the square apex is split into 4 or 5 chitin points as a comb; from the base of this there is another long chitin claw that folds over and across the flat one.

Holo and Paratypes males, Cranbrook, B.C., July. Type No. 137, Garrett coll.

NEURATELIA GRANDIS. New Spc.

Male—Similar to *Obscura* but hind coxæ yellow. Hypopygium distinctive, one very large flat clasp, spiral shaped; the basistyle runs out to a long sharp triangular point. Fore tibiae about equal or shorter to its metatarsus.

Holo and Paratypes males, Allo female; Marysville, B.C., July. Type No. 141, Garrett coll.

ANATELLA DIFFICILIS. New Spc.

It does not fit nicely into any genera, having the legs of one, the Sc of another and the hypopygium of a third.

Male—Head dark; proboscis and palpi yellow brown; scrape and base of antennæ yellow brown; the rest pale brown. Flagellar one about 4; two about 3; and the last two segments about twice as long as broad. Front sunk-in but the lateral ocelli are at least their own diameter away from the eye margin. Thorax and pleura yellow brown, abdomen a little darker; Coxæ and femora yellow; tibiae and tarsi darker; fore tarsus one, slightly longer than its tibia; wing hyaline; C far produced reaching the apex of the wing; Sc joins R and is almost half as long as Cell R1; RS is about the middle of the wing; R 4-5 slightly undulating; RM cross vein long, very oblique; petiole of M is slightly longer, being nearly 1.3 of MI; Cu forks right near the base of the wing. A is short, ending below the tip of Sc2; hypopygium spherical.

Monotype male, Savary Isle, Vancouver, B.C. 9-4-17. Type No. 134, Garrett coll.

BOLETINA PUNCTUS, New Spc.

Male—Head black, palpi yellow, scrape and part of flag one yellow, the rest blackish. Thorax, dorsum yellow brown. Humeri yellow, 3 dark brown clear vitta. Pleura in the middle yellow brown dorsally and near the coxæ blackish. Abdomen long, dark brown, segments 2, 3 and 4 with yellow apical margins. Halteres all yellow; coxæ and legs yellow except apical half of the hind coxæ; fore tarsus one longer than its tibia. Wing long, hyaline; Sc joins C well proximad of RS with Sc 2 about its middle; C not produced; RM cross vein very long, oblique; M forks slightly distad of Cu fork, the latter is distad of the RS base; Cu fork very divergent; hypopygium very similar to *B. Anticus*, differing in that part between the gonostyles, it being split into three distinct pieces.

Holo, Allo and Paratypes, Creston, B.C., July. 19 male, 6 female. Type No. 124, Garrett coll.

BOLETINA MAGNA. New Spc.

Belonging to the *Punctus* group but much larger with the dististyles clavate, the tips sitting on the end like the heel of a boot. Colour as in *Punctus* but C slightly produced; Sc 2 beyond mid Sc; Cu forks below the middle of

RM Cross vein which is comparatively shorter than in *Punctus*. Tip of A is below Cu fork.

Monotype male, Fernie, B.C., July. Type No. 132, Garrett coll.

BOLITOPHILA SIMPLEX. New Spc.

Male—Dark brown. R 2-3 joins R; Cu 1 rises just below M; hypopygium dististyle short dorsally, the base thick, outwardly about half way straight, then angling to the inner tip. The top is truncate. No chitin.

Holotype male, Allotype female, Cranbrook, B.C., Aug.-Sept. Male Paratype, Aug. Type No. 94. Garrett coll.

BOLITOPHILA PERLATA. New Spc.

Male—Dark brown. Wing, R 2-3 joins R; Cu 1 rises below M; hypopygium dististyle arcuate, the chitin tips spiral, appearing bifid, with two strong teeth, unique form. Female, fore tarsi moderately lobed, segment two as long as three.

Holotype male, Allotype female. Bull River, B.C., July, with many Paratypes. Type No. 93, Garrett coll.

BOLITOPHILA DUPLUS. New Spc.

Male—Brown, antennæ, segment one yellow, long; R 2-3 joins R; Cu 1 rises at M; hypopygium, dististyle scoop shape, tips truncate with one corner ending in a chitin point. From within are two chitin appendages, the lower one long, curved upwards, the upper with a narrow base and clavate, the tip foot shaped. Female, the fore tarsi moderately lobed.

Holotype male, Cranbrook, B.C., July; Allotype female, Michel, B.C., Sept. Many Paratypes from Cranbrook, Vancouver and Savray Isle. Type No. 95. Garrett coll.

BOLITOPHILA RACA. New Spc.

Male—Brown; R 2-3 joins R just before its tip; Cu 1 rises just below M. There may be females in the long series but I have not yet placed one to this species. Hypopygium, dististyles round, tapering gradually to a narrow tip shape, the rim chitinized and with two or three black chitin points directed inwards and bristly hairs.

Holotype, Crows Nest, B.C., Aug. Type No. 90, Garrett coll.

BOLITOPHILA CONNECTANS. New Spc.

Male—Brown and yellow. Antennæ segment one nearly all yellow. Wings brown hyaline, R 2-3 strong, slightly bowed, joining C; Cu 1 rises at M; the tip of Cu 2 curves into the tip of A. Hypopygium fleshy, dististyles small, tips bifid, about equal in length. The female seems to have the tip of Cu 2 remote from A and the fore tarsi slightly lobed.

Holotype male, Allotype female, Michel, B.C., Sept. 24. One male paratype. Type No. 88. Garrett coll.

BOLITOPHILA RECURVA. New Spc.

Male—Brown and yellow. R 2-3 tip atrophied but reaches C; base of Cu atrophied; hypopygium, dististyles with a thin base, tips bifid, the outer the longest, the other curved inwards and downwards. Tarsi in the female lobed.

Holotype male, Allotype female, Michel, B.C., Sept. Paratypes from Michel, Wasa, Caulfields, Sarvy Isle and Vancouver, all B.C. One female Banff, Alta., in the museum. Type No. 92. Garrett coll.

BOLITOPHILA CLAVATA. New Spc.

Male—Dark brown; R 2-3 very oblique, arcuate and joins C; base of Cu atrophied. Hypopygium, dististyles rather long, base narrow, tip spoon shape

with the rim chitinized. Female with the tarsi almost imperceptibly lobed.

Holotype male, Michel, B.C., Sept.; Allotype female, Cranbrook, B.C., Oct. Many Paratypes from Michel, Cranbrook and Vancouver, B.C. Type No. 86, Garrett coll.

BOLITOPHILA ACUTA. New Spc.

Male—Brown. R 2-3 oblique, joins C; Cu rises at M. Hypopygium, dististyles, the base narrow, swelling on the outer side to the middle, then sharply dunning to the inner tip, which ends in a sharp chitin point. Two kinds of females run to this species, the one coloured as the male has the mid tarsi of the fore leg almost straightbutdeep though not lobed. Segment two is about $1\frac{1}{2}$ the length of 3. This is probably Acuta. The other female is more yellow with the antennæ thicker and longer. The mid tarsi of the fore leg are very thin and cylindrical; segment two is over twice the length of three.

Holotype male, Allotype female, Michel, B.C., Aug. Many Paratypes from Michel, Aug.; Cranbrook and Fort Steele, July, and Vancouver, June, all B.C. Type No. 87, Garrett coll.

BOLITOPHILO SUBTERESA. New Spc.

Male—Brown. R 2-3 strong, joining C; Cu rises at M; hypopygium, dististyles sausage like with the tip constructed smaller, this smaller part ending in two tips; one is chitinized. The female tarsi are slightly lobed.

Holotype male, Allotype female, Cranbrook, B.C., Oct. Many Paratypes from Cranbrook, Michel, Fort Steele, B.C., July to Oct. Type No. 85, Garrett coll.

BOLITOPHILA PATULOSA. New Spc.

Male—Brown. R 2-3 pale, curves and joins the tip of R; Cu rises at M; Hypopygium, dististyles rather long, base narrow, the tip wider and bifid; the outer branch short, the inner longer and directed in and upwards.

Montotype male, Stanford Univ., California, February. Lot L.S. Jr. 569, sub 8. Type No. 89, Garrett coll.

BOLITOPHILA BILOBATA. New Spc.

Male—Brown. R 2-3 joins C; base of M atrophied, weak or joining the cross vein. Hypopygium, dististyles fleshy, oval with a nose shaped inner lobe below the middle, directed inwards. Female, fore tarsi straight, cylindrical.

Holotype, male, Allotype female, still in copula, Cranbrook, B.C., July. Many Paratypes, Cranbrook, Creston and Vancouver, all B.C. Type No. 91, Garrett coll.

MACROCERA VARIOLA. New Spc.

Male and female—Colour very variable, from almost all yellow to entirely dark, three vitta always present. Wing not pilose, hyaline pale brownish, a small dusky spot in the fork of Cu 1 and Cu 2; apex of R1 thickened; scutellum with bristles.

Holo and Allotypes, Cranbrook, B.C., and many Paratypes from Cranbrook, one female from Banff, Alta., in the museum. Type No. 106, Garret coll.

MACROCERA BICOLOR. New Spc.

Female—Thorax and pleura yellow, three vitta, scutellum with bristles; Abdomen dark red yellow; wing not, pilose, hyaline, tip of R 1 not thickened.

Holotype female, Cranbrook, B.C. Aug., Paratype variety, female; Pleura with dark patches; bases of abdominal segments dark with yellow apical margins. Cranbrook, B.C., July. Type No. 107, Garret coll.

MACROCERA UNIQUA. New Spc.

Male and female—Dark, pleura only yellow; scutellum with bristles; wing, fork of M is below R 2-3; R 1 not thickened. Sc less than half R 1; wing hyaline and not pilose.

Holotype male, Cranbrook, B.C., July; Allotype female, Caulfields, B.C., May. Type No. 108, Garrett coll.

MACROCERA PILOSA. New Spc.

Female—Thorax and pleura yellow; three vitta, pale; abdomen blotched yellow or dark; scutellum bare; wings grayish hyaline, all cells pilose except C, Sc, and R; tip of R 1 thickened, Sc cross vein absent.

Monotype female, Cranbrook, B.C., June. Type No. 112, Garrett coll.

MACROCERA VILLOSA. New Spc.

Male and female—Thorax yellow; abdomen yellow (blotched), the two last segments dark; scutellum bare; wings gray hyaline, all cells pilose except A, Cu 2, R, Sc, and C. (There are three or four hairs in the tip of cell R and Cu 2.) Tip of R 1 thickened.

Holotype male, and Paratype in June; Allotype female, July; all Fernie, B.C. Type No. 111, Garrett coll.

MACROCERA SIMILIS. New Spc.

Female—Nearly all dark; wings gray hyaline, all marginal cells pilose except Sc (even the first and 2nd basal); R 1 not thickened; scutellum with bristles; a stout strong species.

Monotype female, Michel, B.C., Sept. Type No. 110, Garrett coll.

MACROCERA DISTINCTA. New Spc.

Male and female—Thorax and pleura yellow, or very faint vitta; abdomen yellow; bases of segments darker; scutellum bare; wing almost hyaline or the apical two thirds evenly smoked all over though very pale. All marginal cells pilose except C, Sc, and R 1; tip of R 1 thickened.

Holo, Allo and Paratypes, Cranbrook, B.C.; Paratype Caulfields, B.C., July. Type No. 109, Garrett coll.

I do not consider that the genus **ECTREPESTHONEURA** can be separated from **Tetragoneura** by the forking of Cu. In *T. Similis*, Cu 1 is rather strong right up to its base, and it has no petiole; in *T. Robur* and *T. Marceda* Cu 1 can readily be traced to the base of Cu but it is atrophied for some distance. In *T. Atra* the base is absent; but Cu 1 is very strong and abruptly ends slightly proximad of the tip of Sc, where it occupies the center between M and Cu 2; whilst in *T. Arcuata* C 1 is about as long as in *T. Atra* but it angles into Cu 2; in *T. Fallax* and *Pimpla* Cu forks below the proximal tip of the cross vein; thus every grade is indicated even in one local series of species.

TETROGONEURA SIMILAS. New Spc.

Male and female—Black except halteres, two coxæ, femora and tibiae yellow. Palpi yellow brown, hind coxæ at the base or all brownish and signs of brown on the femora. Hypopygium, dorsal plate large, tips very broadly truncate with a small V notch at the middle. Wing as in *T. Robur*.

Holotype, Allo and Paratypes, Cranbrook, B.C., May to Oct., and one from Vancouver, B.C. Type No. 116, Garrett coll.

TETROGONEURA ROBUR. New Spc.

Male and female—Black except palpi, base of antennæ halteres, coxæ, femora and tibiae yellow; tarsi brownish, a black patch at the base and apex of

the hind femora, spurs dark yellow; hypopygium distinct, dorsal plate small, clavate, flat; wing Sc joins R; Cu has no petiole; A is fairly strong. In the female the cerci and ventral abdominal segments are yellow except the last.

Holo male, Allo female, and Paratypes, Cranbrook, B.C., April and May; only four males. Type No. 115, Garrett coll.

MONOCLONIA SIMPLEX. New Spc.

Male—Head brown, face narrow, more yellow, proboscis and palpi yellow; antennæ, scrape and three segments yellow, the rest fuscous; thorax yellow, three vitta; pleura yellow or brown; abdomen dark with the last segment yellow and the hypopygium, coxæ and legs yellow; tarsi darker, tarsi one appearing longer than its tibia; wings hyaline, veins yellow; Sc cross vein well proximad of cell R 1 which is deeper than long. Hypopygium very similar to *M. elegantula*, Johan Fig. 107 but the mid tooth is near the base and the basal arms are different.

Holo and five Paratypes males, Caulfields, B.C., May. Type No. 96, Garrett coll.

In the following species of *Sciophila* none of them were taken in the copula and in consequence the females have to be placed largely by dates and locality; the males are all described on the form of the hypopygium.

SCIOPHILA LONGUA. New Spc.

Head black, palpi and proboscis yellow; antennæ, scrape dark, base of the flagellum yellow. Thorax and pleura chiefly dark red yellow, the dorsum with lateral edges and large humeral corners yellow; abdomen all dark red yellow with very narrow apical margins yellow; hypopygium dark, dorsal plate very long, pear shaped and running to a round point set with a terminal bunch of hairs, and two longer bristles. Inferior clasps three lobed, the one with two long terminal hairs has bristly hairs on the inner side and fine short hairs on the outer side; the median lobe bears 50 or more palmate spines and has a smaller lobe off of it with three long bristles at its tip. Wings hyaline, veins yellow Sc above mid cell R 1, which is $1\frac{1}{2}$ times as long as deep; coxæ and legs yellow, fore tarsi one about as long as its tibia. Female, cerci yellow.

Holo, Allo and Paratypes, Cranbrook, B.C., and Fernie, B.C., May to July. Type No. 99, Garrett coll.

SCIOPHILA NEOHEBES. New Spc.

Very similar to Johannson's description of *Hebes*, but paler; large humeral and pleural corner yellow. The fore tibia is longer than its metatarsus. Hypopygium, dorsal plate round tipped; the terminal hairs simple; superior clasps clavate short, about half showing; inferior clasps 2-2 lobed, the main lobe bearing a very stout black spine on the outer side, a smaller narrow lobe each side of this one, their tips each with two long bristles; the other lobe has 30 to 40 palmate spines. In the female the cerci and vent are yellow.

Holotype, Allo and three Paratypes, Cranbrook, B.C., May to July, and one female, Banif, Alta., in the museum there. Type No. 105, Garrett coll.

SCIOPHILA AGASSIS. New Spc.

Male and female:—Thorax yellow, abdomen dark with small apical margins yellow; antennæ, scrape and flag one and two yellow; legs yellow, fore tarsus one about equal to its tibia; wings, veins yellow, cell R 1 about square; Sc at its proximal end; hypopygium, dorsal plate egg shape running to a mid point. Superior clasps short claw like; inferior clasps apparently two lobed,

the large one bearing 40 or 50 palmate spines, the thin narrow one ending truncate with two long bristles. The female cerci are yellow.

Holotype male, Agassiz, B.C.; Allo and five Paratype females, Nelson, B.C., all June. Type No. 87, Garrett coll.

SCIOPHILA BICOLOR. New Spc.

Male as in *S. Agassiz* but the flagellum more yellow. Abdomen all dark; Hypopygium, dorsal plate oval with a broad truncate end, a small curved hollow at its center; superior clasps within are two pointed; inferior clasps 1-3 lobed, the larger round one only with hairs; and from its side a narrow lobe ending with two long bristles and a ribbon like lobe from below the last ending with four medium long bristles with round tips. The other lobe is also ribbon like, and the tip end has 8 long palmate spines; then near the middle, on one edge, are a cluster of 20 small palmate bristles.

Holo, Allo and Paratype, Marysville, B.C., July. Type No. 100, Garrett coll.

SCIOPHILA BIFIDA. New Spc.

Male and female very similar to all the preceding in colour but the palest of the group. Thorax and pleura yellow; abdomen yellow but signs of the darker red yellow on it. Ant., flagellum more yellow. Wing veins yellow, Sc over proximal end of cell R 1, which is slightly longer than deep; hypopygium, dorsal plate slightly longer than wide, the end with the center third hollowed out, each side on the inner corner are one long and one short black bristles, from there to the edge bristly hairs; superior clasps inside small rodlike with a long bristle at the tip. Inferior clasp 1 and 3 lobed. The main lobe hairy and has two ribbon like lobes from it, one with three the other with two terminal bristles. The other lobe bears about 30 palmate spines.

Holo, Allo and Paratypes, Fernie B.C., June to Sept; 7 male and 5 female. Type No. 104, Garrett coll.

SCIOPHILA DISTINCTA. New Spc.

Male—Almost black, scrape one dark, two lighter; flag one yellow, palpi brown; legs yellow, tarsi brown; veins yellow. Sc over proximal end of cell R 1 which is about square; hypopygium elongate, dorsal plate with the tip narrower, rounded; inferior clasp one four lobes, one a long triangle sharp pointed, another with a round tip, another with a square tip bearing 4 or 5 palmate spines about the middle on one edge; the fourth long narrow with two terminal bristles and a row of medium long bristly hairs set evenly spaced from the tip to the base. Female cerci yellow.

Holo, Allo and female Paratypes, Cranbrook, B.C., April to Oct. Type No. 103, Garrett coll.

SCIOPHILA PARVUS. New Spc.

Male and female—Black; antennæ, scrape and two or three flagellar segments yellow; legs yellow; wing veins dark. Sc over mid cell R 1 which is slightly longer than deep; fore tarsus one much shorter than its tibia; hypopygium long spherical, dorsal plate ovate, a medium broad tip; on each outer corner on the inside are a long and a short black bristle and along the rim three or four longer brown bristles besides the hairs, and the fourth oblong with about 30 palmate spines. The female cerci are dark.

Holotype male, Cranbrook, B.C.; Allotype, Fernie, B.C., June. Paratypes, Cranbrook and Fernie, B.C., May to Oct. Type No. 101, Garrett coll.

SCIOPHILA FUSCA. New Spc.

Male black; and female, scrape yellow, legs yellow, the tips of the hind

femora and a streak along the under side at the base dusky black; wings, veins brown, Sc at the proximal end of cell R 1 which is about square, fore metatarsus longer than its tibia; hypopygium dorsal plate rather square, the sides rounded off, the tip convex, its margin finely serrate, each with a long hair on it. Inferior clasps 1-3 lobed; the main lobe hairy on the outer side but on the inner top corner with 5 or 6 spines with thick bases and fine sharp points; these are above the broader ribbon like lobe and the other ribbon lobe rises below this, both with two long terminal bristles; the other lobe has a ribbon like base but widens out towards the end and has 25 to 30 palmate spines; those of the far end are long, nearly $\frac{1}{2}$ as long as the lobe; all are plain clubbed. Female cerci dark.

Holo, Allo and Paratypes, Cranbrook, B.C., and Fernie, B.C., April to Oct. 3 n. e, 13 female. Type No. 102, Garrett coll.

SCIOPHILA SETOSA. New Spc.

Male and female similar to *S. Fusca* but no black on the hind femora; wing veins yellow; Sc over mid cedd R1; Hypopygium much as in *Fusca* but it lacks the five or six stout spines on the inner rim of the main lobe and the third lobe is broader with the terminal and all palmate spines much shorter, the tips very plainly radiating as in the spokes of a wheel.

Holo and Allo, Cranbrook, B.C., June. Type No. 131, Garrett coll.

SCIOPHILA ACUTA

Male and female similar to *Fusca* but with the humeral corners browner, with the dusky on the hind femora and the hind coxæ dusky; not so plain in the female. Hypopygium rather long black, dorsal plate very long, a narrow triangle with sharp point; inferior clasps unique in form, 1-3 lobed, two long and triangular, the main lobe with three or four chitinised points along its rim.

Holo male, July; Allotype female, Oct., Cranbrook, B.C. Two female paratypes, Fernie, B.C. Type No. 98, Garrett coll.

LEIA HEMIATA. New Spc.

Male- Brown except the head brownish; abdominal segment two on the apical half, three on the apical 2-3, and all the others black; some of the dorsal bristles are black; wings costal, half yellow, a preapical fascia only, as in *L. Dryas*, but it is up and along C; female similar but the head is clear yellow with ocelli set on a black brown triangle; abdominal segments more brown, sometimes the tips of the antennæ brown.

Holo, Allo and Paratypes, Bull River, B.C., June, July. Type No. 114, Garrett coll.

LEIA SHERMANI. New Spc.

Female- Head, thorax and pleura black; abdominal segments black, each with the apical $\frac{1}{4}$ yellow; ventral mostly yellow; all hairs and bristles yellow; antennæ yellow, the flagellum more brownish; coxæ and legs yellow; tarsi brown; wing hyaline yellowish, no fascia; clear.

Montoye female, Agassiz, B.C., June. Type No. 113, Garrett coll. Kindly sent me by R. S. Sherman, who has sent me so many Mycetophilids.

HESPERINUS FLAGELLARIA. New Spc.

Male-Dark brown except the sides of the back of the head, between the dorsal vitta, which are pale dull brown; antennæ long, about as long as the abdomen, all yellow brown, 12 segmented, the scrape short, cup shaped, flagel-

last cylindrical, segment one very long, about 9 times the length of scrape two, flag two less than half one, the rest gradually diminishing to the tip, each with two or three bristly hairs; palpi yellow and large; segment one small; two about equals four, and three half of their length. Wings hyaline, veins brown, stigma black. Hypopygium constructed much as in genus *Bibio* but larger, eyes bare, tibial spurs very small, legs long. Female similar but the antennæ are shorter, only about as long as the thorax; flagellum one about 5 times scrape two; flag two less than half of one, segments 8, 9, 10, 11 about as broad as long; 5 and 6 twice as long as broad. Palpi segment one very small, and three nearly equals the length of two which is equal to four.

Holo male, June; Allotype female, July; Cranbrook, B.C. Type No. 117, Garrett coll.

CERATELION FASCIATA. New Spc.

Female—Head black, face yellow brown, palpi black; antennæ black brown; thorax and pleura shining, dorsum red brown with a broad anterior; Humeral and lateral to $\frac{1}{2}$ way and a broad median line yellow; scutellum yellow with many short black bristles; mesopleura dark red yellow, the rest yellow; halteres bases whitish, the distal half black; abdomen depressed dark red brown; coxæ yellow except the basal 1-3 of mid and $\frac{1}{2}$ of the hind blackish; femora, tibia and tarsi one yellow; fore tarsus one about $\frac{1}{4}$ longer than its tibia; wings gray hyaline, brownish in parts, with the whole apex nearly to R 2-3; also along the tip of Cu 1 and Cu 2 blackish. Both wing tips are worn but C appears not to reach the apex of the wing. The base of R 2-3 is well proximal of R tip; thus it makes a very oblique angle to C; wing otherwise as in *C. Bellulis*.

Monotype female, Cranbrook, B.C. Type No. 136, Garrett coll.

SYMMERUS COQUILA. New Spc.

Female—Very similar in colour to *S. Tristis* Lw. but the wing is strongly pilose; Sc is very short; tip of R 1 not upturned; R 2-3 more oblique; R₅ to R 4 5 straighter; RM, M, Cu and upward deflexion of Cu all in one straight line; M forks nearly over the tip of Cu 2. In this specimen Cu 1 is forked from below the base of R 2-3 in one wing.

Monotype, Cranbrook, B.C., June. Type No. 133, Garrett coll.

DIXA DISTINCTA. New Spc.

The description of *D. Rudis* covers this species except that M is pilose from its basal sixth. (The description of *Rudis* says distal sixth; this should have been basal sixth.) The clasps of the hypopygium are triangular, the apex is the point. The apical lobe as in *Modesta* or *Brevis*. The basal lobe large. The tenth sternite very strong, the ninth sternite flat, twice curved, with the point directed to the ægeridæ. Ninth tergite with a pair of flat prongs, the tips clavate and bifid. The claws of the female have no bristles beneath.

Holo and Allotype, Cranbrook, B.C. There are at least four males. Type No. 130, Garrett coll.

DIXA SIMPLEX. New Spc.

This is a pronounced form of *D. Spiralis* seemingly constant in a series of twenty males, all that I have mounted at present. It has the clasp of a slightly different shape. The apical lobe is once curved, usually flat, a plain U. (Para) Basal lobe very small, about half the size of *Spiralis*. The back part of the ægeridæ is a plain U curve, ending in front of the basal lobe. In *Spiralis* this part runs to a long point ending behind the basal lobe, then the tips join at their base.

Holotype, Cranbrook, B.C., June and Oct. Type No. 129, Garrett coll.