The Canadian Entomologist.

VOL. XXV.

LONDON, MARCH, 1893.

No. 3.

CANADIAN HYMENOPTERA.—No. 3.

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In my last paper (see page 32) I unfortunately repeated the error made by Provancher in giving Vancouver as the habitat of *Ecithrus Provancheri*. I overlooked its correction (CAN. ENT., Vol. XVII, page 160) by Mr. Brodie, who obtained the insect from Muskoka.

Having recently restudied and rearranged my Ottawa collections of Phyllophaga and Xylophaga, so as to prepare for publication in the *Ottawa Naturalist* a complete list of the local species, I have made some notes which may be of more general interest. There are also several species, apparently new, which I prefer to describe here, as I think that all new species should be described (or at least redescribed) in some publication devoted entirely to Entomology, and accessible to all students. The publication of species in miscellaneous proceedings and transactions prevents many entomologists from having access to them, necessitates an outlay of money and time which in many cases cannot be spared by students, and gives rise to much unnecessary synonymy, etc.

One point of interest in the Tenthredinidæ is the excess of the females, both as regards species and individuals. Of the 152 species which have been taken in this neighborhood the females of 139 species are represented, and the males of 82 only. Both sexes are recognized in 69 species, leaving 70 represented by the female only, and 13 by the male only. This disparity of the sexes is more marked in some sections of the subfamily, notably in the unwieldy and difficult genus *Nematus*, where of 34 species there occur females of 32, and males of only 10, *i. e.*, only the male of every third species has been found.

The scarcity of males among sawflies is even more marked, when the occurrence of individuals is considered; for in 1,262 specimens there are 885 females and 377 males. Of many species the females and males differ so much in coloration that they have been described as distinct insects, and the relationship of some have undoubtedly not yet been recognized, but there are other species of which, while the sexes are

known and readily distinguished, it is very difficult to obtain the males either by collecting in the field or by breeding. Of such may be instanced *Nematus Erichsonii*, Hart. (= *N. cinctus*, Newm., according to Kirby), of which I have only obtained one male, although the females can be taken in any desired number.

Acordulecera saginata, Prov., is apparently the male of *A. dorsalis*, Say., a species which is found upon oak and hickory, the larvæ skeletonizing the leaves.

NEMATUS RUFOCINCTUS, n. sp. Female—Length, 8 mm. Black, with pale legs and rufous band on abdomen. Head rather small; the ocelli in shallow basins defined anteriorly by a distinct sinuate ridge above the antennæ; edge of clypeus, labrum and palpi whitish; antennæ slender, with subequal joints. Thorax polished; tegulæ, angles of prothorax and legs in great part, white; the anterior and median femora touched with brown; posterior legs with apical two-thirds of femora, apical half of tibiæ and the tarsi, black; wings large, hyaline; nervures and stigma black; third submarginal cell quadrate, small, hardly larger than first; the recurrent nervures received about one-fourth respectively from the base and tip of the second submarginal cell. Abdomen robust, with dorsal ridge; basal plates, sides of first segment, spots on fifth, and the terminal segments black, remainder rufous.

One female taken near Hull on 26th June, 1887, upon alder, and in general appearance resembling a small *N. Erichsonii*, Hart.

NEMATUS THORACICUS, n. sp. Female—Length, 6 mm. Head, metathorax and base of abdomen black, remainder rufo-testaceous. Head as wide as thorax, ridges surrounding ocelli ill-defined, but prominent between antennæ; palpi and mandibles pale, the latter with red tips; antennæ long and slender, joints subequal. Thorax rufous, except sutures below wings and the scutellar region, including the scutellum, black; legs rufous, the posterior with tips of tibiæ and the tarsi almost black; wings hyaline, nervures and stigma brownish, third submarginal cell one and one-half times as long as wide; recurrent nervures received respectively about one-fifth from base and one-sixth from apex of second submarginal cell. Abdomen short and stout, slightly ridged dorsally; basal plates and spot on first and second segments black, remainder rufous.

One female taken near the city on May 11th. This species is near *N. bivittatus*, Nort., but the head is much less rugose, and the mesothorax is not lineate with black, etc.

NEMATUS LINEATUS, n sp. Female—Length, 7 mm. Rufo-testaceous. Head nearly white below the antennæ, and honey-yellow above, palpi dusky; antennæ as long as head and thorax, rather stout, black; a black spot between ocelli. Thorax orange-yellow; tegulæ and angles of prothorax white; a line on median lobe of mesothorax, a spot above insertion of posterior wings, the apex of scutellum and adjoining sutures, black; legs yellow, coxæ and trochanters paler, tips of posterior tibiæ and tarsi dusky; wings hyaline, nervures brownish, stigma pale, third submarginal cell nearly twice as long as first, recurrent nervures received about one-fourth the distance from base and tip of second submarginal cell. Abdomen broad, compressed toward apex, paler than thorax, basal plates and narrow broken dorsal line black, ovipositor prominent.

One female collected near city on May 5th.

Fenusa varipes, St. Farg. (*melanopoda*, Cam.), previously recorded by Mr. Fletcher as introduced from Europe, was observed on Aug. 26th, upon native alders in a swamp not far from the Experimental Farm, and a number of the leaves showed the characteristic blotches caused by the larvæ. The species can, therefore, be considered as naturalized.

Emphytus multicolor, Nort., (= *Strongylogaster multicolor*, Nort., = *Emphytus hullensis*, Prov.) This is one of the species in which variability in wing-venation has led to a redescription. I have the types, ♀ ♂, of *E. hullensis*, and they agree exactly with the description of *S. multicolor*. Of six specimens which I have since collected, four have four submarginals, as in *S. multicolor*, one three submarginals, as in *E. hullensis*, and the remaining one has three cells in one wing and four in the other. As the insect seems to more nearly resemble an *Emphytus* than a *Strongylogaster* or *Taxonus*, I have referred it to the former genus.

Harpiphorus tarsatus, Say. From a series of specimens taken upon *Cornus* it seems evident that *H. varianus*, Nort., and *H. versicolor*, Nort., are only varieties of this species. My specimens vary much in colour, but even the blackest show more or less trace of rufous. The insect is very active and difficult to net, as it darts to and fro among the bushes. On one occasion I heard a rustling of insect wings on a branch near the ground and found it to be caused by two males in pursuit of a female, and I netted the three at one stroke.

Monostegia maculata, Nort. I have already (*Insect Life*, Vol. II., p. 227) discussed the variation in the wing-venation of our common Strawberry Sawfly, and a further examination of the species seems to indicate

that it should be placed in the genus *Monostegia*. It is certainly very unlike the other species of *Harpiphorus*. Under the name *M. ignota*, Nort., I propose to retain a few immaculate specimens which also slightly differ in other respects.

MACROPHYA ALBILABRIS, n. sp. Male—Length, 8 mm. Black; anterior legs and base of posterior pale. Head rugosely punctured, almost opaque, no depressions or sutures above antennæ; clypeus deeply emarginate, labrum truncate; both, with spot on mandibles, white; antennæ stout. Thorax coarsely punctured, the scutellum rugose; edge of tegulæ and fine line on border of prothorax white; anterior and median legs pale, including portion of coxæ, the femora and tibiæ with dusky abbreviated lines above; tips of posterior coxæ, the trochanters, basal third of femora with line below to apex, white; remainder of femora, the tibiæ and tarsi, black. Edges of basal plates white dorsally.

One male taken near the city, but not dated. This insect is closely allied to *M. flavicoxæ*, Nort., and may prove but a variety of that species, though none of my examples of *flavicoxæ* show any variation of this kind. The chief differences are in the colour of the posterior legs, the white touches on basal plates, and the more deeply emarginate clypeus.

Pachyprotasis omega, Nort.—The insect described by Provancher (CAN. ENT., Vol. XVII., p. 50.) as *Synairema americana*, seems, from his description, to be identical with this species, except that he gives the length as .46 inch, whereas my largest specimen of *omega* is only about .35 inch. Norton in his description of the species gives the length as .26 inch.

Pachyprotasis delta, Prov. Since my notes on this species (CAN. ENT., Vol. XVIII., p. 32) I sent to Mr. Kirby a small lot of Tenthredinidæ regarding which he writes: "The principal remark I have to make on this lot of insects is, that the insect sent as *Tenthredo* (?) *delta*, Prov., is a true *Pachyprotasis*, near *P. discolor*, Klug., an European species."

Pachyprotasis varipicta, Har. On June 7th, I captured two males which evidently belong to the species which I described as a *Harpiphorus* (CAN. ENT., Vol. XXI., p. 96), and these show that the species belongs to *Pachyprotasis*, and has, like *P. delta*, very unstable wing venation. One specimen has, like the female described, two cross nervures in the lanceolate cell of one wing. The other has in the right anterior wing five submarginals, the third cell being subdivided almost in continuation of the second recurrent. These males differ from the female only in having the

apical two-thirds of posterior femora blackish, and the basal segment of abdomen darker at the base. The outer cells of the posterior wings are closed, as in *P. delta*.

Strongylogaster soriculatus, Prov. *S. soriculatipes*, Prov., appears to have been the name under which this species was first published, but the Abbé has used *soriculatus* in republishing, and the old name does not appear in his index.

Tenthredo grandis, Nort. This species is somewhat variable in the extent of its white markings, and I have one specimen which answers exactly to the *T. nigricollis*, Kirby, described from Newfoundland.

Tenthredo basillaris, Prov. This species is placed in Cresson's catalogue as a synonym of *T. signata*, Nort. My specimens, five females, of which one was determined by Provancher, are remarkably uniform in their markings, and do not agree with the description of *T. signata*, so that I am disposed to retain the species as distinct.

Tenthredopsis Evansii, Har. I have a female of this species from the Rocky Mts. near Calgary, and have examined another from Colorado (Gillette.) This insect is very near, perhaps identical with, *Tenthredo viridescens*, Fourcr. (*scalaris*, Klug.) an European species.

TENTHREDOPSIS (?) ANNULICORNIS, n. sp. Female.—Length, 10 mm. Head black, rugosely punctured; mandibles, clypeus and triangular spot above rufous, the clypeus strongly notched; antennæ slender, two basal joints and base of third rufous, apex of third, the fourth and terminal three black, joints five and six pure white. Thorax with the pleura coarsely punctured; rufous above with spot on each lateral lobe of mesothorax and the scutellar sutures black; legs rufous, tips of coxæ, the trochanters and posterior tarsi white, tip of posterior femora and of tibiæ black; wings hyaline, nervures blackish, base of stigma white; lanceolate cell with straight, short, cross nervures, as in *Tenthredo*, etc.; posterior wings without middle cells. Abdomen rufous.

Male.—Length, 9 mm. Antennæ a little stouter, testaceous, rufous toward base. Abdomen with apex blackish.

The female was taken near the city on June 6th, 1891, and the male on May 28th last. The antennæ of the male differ in colour, and in being slightly stouter, from those of the female, but in all other respects it seems to be identical. The strongly notched clypeus, and the absence of middle cells in the posterior wings, would seem to refer the female to *Perineura*, but the outer cells of posterior wings of the male are not

closed. These insects, except for the antennæ, look very much like small specimens of *Harpiphorus varianus*.

PAMPHILIUS RUFICEPS, n. sp. Female—Length, 15 mm. Black, with rufo-testaceous head and legs. Head very large; coarsely punctured, rufous, with a small black spot enclosing the ocelli; mandibles very large; antennæ slender, about 35-jointed, black, with three basal joints rufous, third joint more than twice as long as the fourth. Thorax coarsely punctured, the pleura quite rugosely; tegulæ, anterior angles, lateral lobes and apex of median lobe of mesothorax and scutellum, rufous; beneath black, with dull rufous spots on pleura; legs rufous, coxæ paler, tarsi dusky, the posterior almost black, anterior tibiæ with side spur. Abdomen broad, with narrow lateral margin of bright lemon-yellow.

One female, found walking on a doorstep in the city, May 31st, 1891. This species is near *P. (Lyda) brunniceps*, Cress.

PAMPHILIUS CINCTUS, n. sp. Female—Length, 11 mm. Black, with red band on abdomen. Head polished behind the ocelli, rugulose anteriorly; face flat with a ridge between antennæ, not reaching anterior margin of clypeus; clypeus broad, squarely truncate, not margined, and coarsely punctured; cheeks below the eyes, mandibles, clypeus, triangular spot at inner summit of each eye, similar spots behind on margin of occiput, and two minute dots below ocelli, white; antennæ black, long, slender, 25-jointed, third joint hardly longer than fourth. Thorax polished; tegulæ, short lines in front and beneath, a double triangular spot on middle lobe of mesothorax, scutellum and postscutellum, white; legs pale yellow, including tips of coxæ, anterior tibiæ without side spur; wings hyaline with brown nervures, third submarginal cell large. Abdomen with first segment, except a black spot on each side, and three following, rufous; apical segments black.

One female, taken near the city on June 28th. It resembles in appearance *P. rufofasciata*, Nort., but differs in shape of antennæ and clypeus and in markings.

Pamphilius fascipennis, Cress. This fine species, originally described from the White Mts., N.H., has been taken by Mr. Evans at Sudbury.

Xyela minor, Nort. In June, 1886, I captured by sweeping on the margins of a wood composed of pines, spruces, etc., a male and a female of this very interesting species, which Mr. Kirby thinks should constitute a distinct genus from the European species of *Xyela*. I failed to obtain the insect again until May 11th, 1891, when, in beating spruce trees, I

secured eight females. I endeavored to ascertain if the insects were ovipositing in the twigs, but they are so small and inconspicuous that it was impossible to find them without beating them from the trees. Subsequent beatings in the same locality, and careful search again last May failed to turn up any more. It seems probable, however, that the insect breeds in the young shoots of the spruce (as none could be found on adjoining trees or shrubs of other species), and some of our collectors, knowing when and where to search, may succeed in discovering if such be the case. It may also live in other conifers, as Provancher records taking the female on the buds of white pine, on which I have also taken one specimen.

Xiphydria canadensis, Prov.? In an article on *X. albicornis* ("A new foe to the maple." Rep. Ent. Soc., Ont., 1883, p. 40), I stated that some of the males had the antennæ black, as in *X. Provancheri*, Cress., and that this species and *X. canadensis* were probably only varieties of *X. albicornis*, with which may be also included probably *X. maculata*, Say. In re-studying my specimens I find a female which seems to be distinct, but which, however, does not agree with descriptions of any of the species quoted above as regards markings, although it agrees with *X. canadensis* in having the "head rugose except upon the vertex," and not wishing to create an unnecessary new name I have placed it under that. It has the following characteristics which are not given in the other descriptions:—Antennæ black, 16-jointed only, the second joint much shorter than in *albicornis*, not more than half as long as the third; no white markings above the antennæ on the front, but an almost square patch below and a small spot on each side of clypeus, adjoining a larger spot under the eye. There is also a small spot on the posterior margin of the head behind each eye, and two short lines above ocelli which are differently situated from those of *albicornis*. In that species the lines start about on a level with ocelli and stop before attaining the occipital margin, while in the specimen under consideration they start from the occipital margin and stop at some distance above ocelli. The coxæ are also uniformly rufous instead of black, or blackish, and the markings of thorax are different. The usual white spots occur on segments one to seven of abdomen, with the exception of the sixth.

Xiphydria rufiventris, Cress. This addition to the Canadian fauna has been made by Mr. Fletcher, who has a fine female example taken last year.

Tremex columba, Linn. In July, 1891, Mr. John Stewart, of this city, informed me that he had a stick of firewood containing a great many larvæ of beetles. Some days later I called on him to examine it and found that the insects had commenced to emerge, and that they were the common Horntail. The log was gnarled rock-maple, about 10 inches in diameter, partly decayed, but still very hard, as was proved in sawing out a section, which I took home. I secured a number of larvæ and pupæ, and from the section retained numerous flies emerged, of which only one was a male. On leaving for Japan (July 22nd) I locked the block up in an old cabinet, and on my return found that several more females had appeared, and of course died during my absence. The fact of most interest concerning these is that one had endeavored to deposit in the block, and had died with the ovipositor deeply inserted.

NEW CHERNETIDÆ FROM THE UNITED STATES.

BY NATHAN BANKS, SEA CLIFF, N. Y.

Since my last article on this group (CAN. ENT., Aug., 1891), I have obtained quite a number of forms; some of the new ones are described in this article. Two genera, new to the U. S., are recorded, both of which occur in South America. *Chelifer alius*, described by Leidy in Proc. Phil. Acad. Sci., 1877, agrees, as far as description goes, with *Chelanops oblongus*, Say, and with no other form known to me, therefore I consider it a synonym of *C. oblongus*.

CHELANOPS PALLIPES, n. sp.

Length, 3 mm. Colour: cephalothorax, dark brown; palpi, red-brown; dorsal scutæ, yellow-brown; legs, yellow-brown. General appearance of *C. acuminatus*, but the hand is not black as in that species. Structure also similar to *C. acuminatus*, differs in being furnished with clavate hairs; the trochanter does not project as much behind; the femur is more slender; the tibia is not nearly as much gibbose on the inner side; the hand less broad and shorter; the fingers much more slender, about as long as the hand.

California. A few specimens.

CHELANOPS LATUS, n. sp.

Length, 3.2 mm. Cephalothorax and palpi red-brown, the fingers black, scutæ red-brown, legs brownish-yellow. Structure similar to *C.*