

- FIG. 66. Tabanid Dipteron *Pangonia longirostris*.
 FIG. 67. Meloid Coleopteron *Nemognatha piezata*.
 FIG. 68. Rhipiphorid Coleopteron *Rhipiphorus dimidiatus*.
 FIG. 69. Hymenopteron *Bracon liberator*.
 FIG. 70. Mecopteron *Nannochorista dipteroides*.
 FIG. 71. Dipteron *Asyndulum montanum*.
 FIG. 72. Thysanopteron *Heliothrips*.
 FIG. 73. Psocid *Psocus venustus*.
 FIG. 74. Mallophagan, *Lamobothrium gypsis*.
 FIG. 75. Homopteron *Ptyelus flavescens*.
 FIG. 76. Anopluran *Pediculus vestimenti* (maxilla, hypopharynx, and labium).
 FIG. 77. Lepidopteron *Micropteryx (Eriocephala) sepella*.
 FIG. 78. Lepidopteron *Tegiticula yuccasella*.
 FIG. 79. Lepidopteron *Ctenucha virginica*.
 FIG. 80. Dipteron *Tabanus* sp.

QUARTER CENTURY OF SPECIES OF TENTHREDO (HYMENOPTERA).¹

BY ALEX. D. MACGILLIVRAY,

URBANA, ILL.

With many species of Hymenoptera where the color forms an important part in distinguishing the species, the males are frequently differently colored from the females. Unless specimens are taken in copulation or the environmental conditions are such that the two sexes can be identified without question, it necessitates the describing of the males and females under different names. Norton and others have tried to combine the two sexes from general appearances, but I believe it is much better to make a synonym than to make the mistake of combining males and females although quite similar in general appearance, that do not belong together. Because of this inability to recognize the two sexes of the same species, the species of *Tenthredo* must be treated in this way.

Tenthredo remea new species.

Female. Body black with the labrum, clypeus, mandibles, a spot on each occipital orbit, a dot at the meso-caudal angles of the compound eyes, collar

¹ Contributions from the Entomological Laboratories of the University of Illinois, No. 77.

broadly, tegulæ, spot above posterior coxæ, most of basal plates, ends of coxæ, trochanters, femora except a bar on upper side of distal end, tibiæ, and tarsi, yellow; clypeus roundly emarginate; antennæ with the first segment of the flagellum longer than the second and third together, the second longer than the third; frontal furrow broad, deep, with a median carina, extending to the median ocellus; head polished; mesonotum and mesoscutellum finely punctured; abdomen depressed; saw-guides short, upper margin oblique, ventral margin rounded, distal end obliquely broadly rounded; wings yellowish hyaline, veins brown, stigma and costa paler. Length, 14 mm.

Habitat: Corvallis, Oregon; received from A. L. Lovett, Finch collector.

This is a beautiful large species, the *subcærulca* of MacGillivray.

Tenthredo remora new species.

Male. Body black with the labrum, clypeus, mandibles, genal orbits, extending broadly onto the occipital orbits, a dot at meso-caudal angle of each compound eye, the collar, the tegulæ, the mesopleura, pectus, the metapleura entirely, the basal plates, and the legs except a dot or bar on the distal part of the upper side, dirty white; abdomen rufous, approximating remainder of body in shade on ventral aspect; clypeus squarely emarginate; antennæ with the first segment of the flagellum longer than the second, shorter than the second and third together, the second longer than the third; wings hyaline, veins and stigma pale. Length, 12 mm.

Habitat: Corvallis, Oregon; F. C. Shepard, collector.

This species appears something like *magnata*.

Tenthredo redivia new species.

Female. Body black with the labrum, clypeus, mandibles, genal orbits, extending broadly onto the occipital orbits, continued as a line along the frontal orbits, dilated and extending beyond the meso-caudal angles of the compound eyes, collar broadly, tegulæ, a spot on the mesal margin of each lateral lobe of the mesonotum, the mesoscutellum, a broad oblique band on the metapleura, a spot above the posterior coxæ, the sides of the basal plates, the coxæ and trochanters, becoming rufous on the posterior, and the lateral margins of the first three abdominal segments, yellowish-white; the legs rufous except the parts named and an indefinite band on the proximal part of the profemora and protibiæ and also beyond above the third segment of the flagellum, indistinctly rufous; antennæ with the first segment of the flagellum long, not as long as the subequal second and third segments together; clypeus narrowly emarginate; frontal furrow broad with a mesal carina; head polished; saw-guides with the dorsal and ventral margins converging, the distal portion obliquely rounded; wings hyaline, veins brown, costa and stigma pale. Length, 10 mm.

Habitat: Corvallis, Oregon; received from A. L. Lovett, Foster collector.

This species is near *scævola* Cresson.

Tenthredo retosta new species.

Male. Body black with the labrum, clypeus, mandibles, genal orbits, occipital orbits, frontal orbits for one-half their length, connected ventrad of the antennæ, a dot at the meso-caudal angle of each compound eye, collar, sides of pronotum, tegulæ, mesopleura, pectus, metapleura, spot above posterior coxæ, sides of basal plates, legs except a black line on the protibiæ, protarsi, mesotibiæ, mesotarsi, and upper side of metacoxæ, metatrochanters, metatibiæ, and all of the metatarsi, yellow-white; venter of the abdomen, yellow-white, extending along each side as a narrow margin onto the dorsal aspect; antennæ with second and third segments of flagellum subequal, together longer than the first; clypeus roundly truncate; frontal furrow broad and shallow; wings hyaline, veins and stigma brownish. Length, 8 mm.

Habitat: ?Corvallis, Oregon; received from A. L. Lovett.

Tenthredo resima new species.

Female. Body black with the labrum, clypeus, mandibles, genal orbits, extending broadly onto the occipital orbits and as a line along the frontal orbits, dilated at the meso-caudal angles of the compound eyes, connected by a transverse spot below the antennæ, the collar, the tegulæ, the mesoscutellum, a broad band on the mesopleura, spot on the metapleura, a spot above the metacoxæ, the sides of the basal plates, the coxæ and trochanters almost completely, and the sides of abdominal segments one to three, yellow; the legs, except an indefinite band on the upper side of the proximal parts of the profemora, and the abdomen beyond the third segment, rufous; clypeus squarely emarginate; frontal furrow deep, V-shaped, without mesal carina; antennæ with second and third segments of the flagellum elongate, subequal, together longer than the first segment; saw-guides with the dorsal margin straight, ventral margin straight on cephalic portion, caudal rounding and oblique; wings hyaline, veins brown, costa and stigma pale. Length, 10 mm.

Habitat: Mary's River, Corvallis, Oregon; received from A. L. Lovett.

Tenthredo ripula new species.

Male. Body black with the labrum, clypeus, mandibles, genal orbits, occipital orbits broadly, extending onto vertical orbits, connecting by a narrow line from genal orbits to frontal orbits, area between and above antennæ, extending as two lines along the sides of the frontal furrow, caudal margin of the head, prothorax, triangular spot on each half of the median lobe of the mesonotum, mesoscutellum, metascutellum, lateral and ventral aspects of the thorax, ventral aspect of abdomen, extending on each side as a margin on dorsal aspect, legs, except a black line on femora, tibiæ, and tarsi, yellowish-white; clypeus roundly emarginate; frontal furrow deep, concave; wings hyaline, veins black, costa and stigma white. Length, 9 mm.

Habitat: Corvallis, Oregon; received from A. L. Lovett.

Tenthredo rima new species.

Male. Body black with the labrum, clypeus, mandibles, the genal orbits, extending broadly onto the occipital orbits, narrowly onto the frontal orbits, a long spot at the meso-caudal angle of each compound eye, the collar, tegulæ, the ventral margin of the pronotum, band on the mesopleura, pectus, band on metapleura, spot above posterior coxæ, sides of basal plates, venter of abdomen, extending as a narrow margin onto the dorsal aspect, and legs except a black band above, broader on coxæ, yellow-white; clypeus roundly emarginate; antennæ with the first segment of the flagellum subequal to the subequal second and third segments together; frontal furrow broad and shallow; wings hyaline, veins brownish, costa and stigma pale. Length, 10 mm.

Habitat: Corvallis, Oregon; received from A. L. Lovett, Scott, collector.

Tenthredo rabida new species.

Female. Body black with the labrum, clypeus, mandibles, collar, tegulæ, spot above posterior coxæ, sides of basal plates, and the underside of the front and middle tibiæ, greenish-white; abdomen beyond the third segment, including the saw-guides, except their margins, rufous, also the distal segment of all the tarsi; clypeus broadly roundly emarginate; antennæ with the first segment of the flagellum longer than the second but distinctly shorter than the subequal second and third segments together; head polished, frontal furrow deep, irregular; saw-guides with the dorsal margin straight, the ventral margin straight, becoming convex and convexly rounded at apex; wings smoky, the veins including the costa, black, the stigma paler. Length, 12 mm.

Habitat: Mary's Peak, Corvallis, Oregon; L. G. Geniner, collector.

This species runs in tables to *semirufa* Norton.

Tenthredo restricta new species.

Male. Body black with the labrum, clypeus, mandibles, area between the antennæ, dot above each antenna, genal orbits, lower half of occipital orbits, dot at summit of eyes, collar, tegulæ, prothorax for most part, mesoscutellum, mesopleura and metapleura for most part, mesosternum, spot above posterior coxæ, sides of basal plates, a mesal dot on the tergum of the first abdominal segment, a broad band upon the caudal part of the second to fourth abdominal terga, greater part of venter of abdomen, prothoracic and mesothoracic legs, except a black line on femora and tibiæ, tarsi black, metathoracic legs with the coxæ, and underside of the trochanters and femora, yellow; abdomen with fifth and following segments rufous; antennæ with third segment longer than fourth, fourth and fifth subequal; clypeus deeply emarginate; frontal furrow with sides converging below; wings hyaline, veins and stigma and costa black. Length, 11 mm.

Habitat: Alsea, Oregon; A. L. Lovett, collector.

This species runs to *nigritibialis* from which it is easily separated.

Tenthredo ralla new species.

Female. Body black with the labrum, clypeus, mandibles, genal orbits, extending onto the frontal orbits and broadly onto the occipital orbits, the collar, the tegulæ, the ventral margin of the pronotum, the mesopleura broadly, the metapleura, a spot above the posterior coxæ, the sides of the basal plates, the coxæ, the trochanters, and the proximal portion of the femora, yellowish-white; the pectus for the most part, extending onto the pleural pale marks, the remainder of the legs, and the abdomen beyond the middle of the first segment, rufous; clypeus narrowly shallowly emarginate; frontal furrow shallow, irregular, not extending to the median ocellus; saw-guides with the dorsal margin straight, the ventral slightly convex, the distal end rounded and truncate; the wings yellowish, the veins including the costa, yellowish, stigma blackish. Length, 12 mm.

Habitat: Mary's Peak, Corvallis, Oregon; A. L. Lovett, collector.

This species has many characteristics in common with *signata* Norton.

Tenthredo repleta new species.

Female. Body black with the four or five distal segments of the antennæ, the underside of mesotibiæ and metatibiæ, and all the tarsi for the most part, dirty white; antennæ with the first segment of the flagellum a little longer than the second, the second and third subequal; clypeus roundly emarginate; the mesopleura and notum punctured; the saw-guides with the dorsal and ventral margins slightly converging, the distal end roundly truncate; the wings smoky, the veins including the costa and stigma, black. Length, 13 mm.

Male. The two sexes are indistinguishable except that the male is more slender and shorter. Length, 11 mm.

Habitat: Mary's Peak, Corvallis, Oregon; A. L. Lovett and L. G. Gontner, collectors.

This species appears to be near *nigricollis* Kirby.

Tenthredo reflua new species.

Male. Body black with clypeus, labrum, mandibles, spot beneath antennæ, genal orbits, lower half of occipital orbits, collar, tegulæ in part, pronotum in great part, oblique band on mesopleura, mesosternum broadly, separated from mesopleura by a narrow black band, line on metapleura, spot above posterior coxæ, sides of basal plates, some of the cephalic sterna, prothoracic coxæ, remainder of prothoracic legs beneath, mesothoracic legs beneath except their tarsi which are black, and the coxæ and trochanters and a small proximal portion of the metathoracic femora, yellow; distal part of the metafemora, their tibiæ, and tarsi beneath, and the abdomen beyond the third segment, rufous; the second and third abdominal terga each with a mesal rufous spot; antennæ with third segment longer than fourth, fourth and fifth subequal; frontal fur-

row narrow and deep; wings hyaline, slightly smoky, veins and stigma and costa and stigma blackish. Length, 12 mm.

Habitat: Bellfountain, Oregon; A. L. Lovett, collector.

This species is similar to *variegata* but larger and stouter.

Tenthredo rabiosa new species.

Female. Body black with the labrum, clypeus, front, mandibles, genæ, orbits, lower half of occipital orbits, facial orbits broadly, dilated above, a dot above each antenna, pronotum, tegulæ, a triangular mark on each lateral lobe of mesonotum, the two subadjacent, mesoscutellum, a broad band on each mesopleuron, a line on each metapleuron, a spot above the metacoxæ, the sides of the basal plates, a band on the lateral margin of abdominal segments one to three, the coxæ and trochanters, except partially above, yellow; abdomen beyond the third segment, legs beyond trochanters, and antennæ beyond third segment, rufous; clypeus deeply emarginate; antennæ with third segment nearly as long as the fourth and fifth together, the fourth longer than the fifth; frontal furrow deep, narrow; head polished, mesonotum finely punctured; saw-guides with dorsal and ventral margins straight, distal end bluntly rounded; wings yellowish hyaline, veins black, costa and stigma yellow. Length, 12 mm.

Habitat: Philomath, Oregon; A. L. Lovett, collector.

This species is similar in general appearance to *scævola* Cresson.

Tenthredo rabula new species.

Male. Black with the clypeus, labrum, mandibles, spot below antennæ, dot above each antenna, dot at summit of each compound eye, genal orbits, ventral half of occipital orbits, collar, tegulæ, irregular band on mesopleuræ, line on metapleura, spot above posterior coxæ, all the legs except a black line above, the sides of the basal plates, venter of the abdomen, extending as triangular spots onto terga and two sides connected by a fine line along caudal margin, white; antennæ with first segment of flagellum longer than second, second and third subequal; wings hyaline, slightly smoky, veins blackish, stigma in great part pale, costa with proximal half pale and distal half black. Length, 9 mm.

Habitat: Corvallis, Oregon; Hunter, collector.

This species runs to *pectoralis*. Its markings are very distinctive for a male.

Tenthredo racilia new species.

Male. Body black with the labrum yellow and the legs beyond the trochanters and abdominal segments one to six, rufous; antennæ pale beneath; antenna with first segment of flagellum longer than the second, the second and third subequal; clypeus broadly roundly emarginate; head polished; frontal furrow constricted below, walls not high; wings hyaline, costa and most of

the stigma pale, the medial and radial veins black, the others pale. Length, 10 mm.

Habitat: Corvallis, Oregon; L. B. Couch, collector.

This species runs to *rubens*.

Tenthredo refractaria new species.

Female. Body black with labrum, two spots on the clypeus, spot on each mandible, spot on each genal orbit, an interrupted line on facial orbits, collar broadly, tegulæ, oval spot on pleura, spot above posterior coxæ, all the coxæ except above, and the trochanters, yellow; the legs beyond the trochanters, except a black ring on distal end of posterior tibiæ, and the abdomen beyond the basal plates, rufous; antennæ rufous beneath, first segment of flagellum longer than second, second longer than third; clypeus roundly shallowly emarginate; saw-guides with the dorsal and ventral margins converging, bluntly pointed at apex; wings hyaline, smoky to yellowish, costa and most of stigma pale, veins black. Length, 12 mm.

Habitat: Union County, Oregon; A. L. Lovett, collector.

This species resembles *edwardsii*.

Tenthredo resupina new species.

Male. Body black with clypeus, labrum, mandibles, genal orbits, ventral half of occipital orbits, dot at summit of compound eyes, collar, tegulæ, ventral margin of pronotum, band on mesopleura, all the coxæ, and trochanters, femora of the prothoracic and mesothoracic legs, except a black line above, yellow; remainder of legs and the abdomen beyond the basal plates, rufous; antennæ with the first segment of the flagellum slightly longer than the second, the second and third subequal; antennal furrow deep and broad, not constricted below; clypeus deeply emarginate; head polished; thorax sparsely punctate; wings hyaline, yellowish, costa and stigma pale, veins black. Length, 8 mm.

Habitat: Bellfountain, Oregon; A. L. Lovett, collector.

This species runs in tables to *scævola* Cress.

Tenthredo rustica new species.

Male. Body black with the clypeus, labrum, mandibles, spot between antennæ, dot above each antenna, dot at corner of each compound eye, line on ventral part of facial orbits, genal orbits, ventral half of occipital orbits, line on collar, tegulæ, ventral margin of pronotum, mesosternum, continuous with mesopleura, line on metapleura, spot above posterior coxæ, lateral margins of basal plates, prothoracic legs except black line above, extending to end of tibiæ, tarsi more or less rufous, coxæ and trochanters and femora of mesothoracic legs, except black line above, and coxæ and trochanters of metathoracic legs, except black line above, yellow; mesotibiæ, metafemora in great

part, metatibiæ, and abdomen beyond basal plates, rufous; antennæ with the first segment of the flagellum slightly longer than the second, second and third subequal; wings hyaline, costa and proximal portion of stigma pale, veins black. Length, 10 mm.

Habitat: Union County, Oregon; A. L. Lovett, collector.

This species is quite similar to *variegata*.

***Tenthredo reticentia* new species.**

Female. Body black with the labrum, clypeus, mandibles, spot on lower portion of occipital orbits, dot at angle of compound eyes, collar, tegulæ, spot above posterior coxæ, sides of basal plates, and the underside of the prothoracic femora more or less, yellow; all the femora, prothoracic and mesothoracic tibiæ, except above, the metathoracic tibiæ entirely and all the tarsi more or less, rufous; antennæ with the first segment of the flagellum nearly as long as the subequal second and third segments together; frontal furrow deep, parallel sides; wings hyaline, veins, costa, and stigma for the most part, black. Length, 10 mm.

Habitat: Corvallis, Oregon, E. O. Dalgren, collector and Alsea, Oregon, A. L. Lovett, collector.

This species runs to *nigri-fascia*.

***Tenthredo reputina* new species.**

Male. Body black with the clypeus, labrum, mandibles, genal orbits, ventral part of facial orbits, connected ventrad of antennæ, dot above each antenna, dot at summit of compound eyes, most of occipital orbits, collar, tegulæ, lateral portion of pronotum in great part, mesoscutellum, mesosternum, extending broadly onto mesopleura, line on metapleura, spot above posterior coxæ, sides of basal plates, and all the legs except a black line above, metatibiæ and metatarsi in part rufous, yellow; abdominal terga, except a narrow cephalic portion, often interrupted at middle of cephalic margin, rufous; abdominal sterna yellow and rufous; antennæ with first segment of the flagellum longer than the second, second longer than third; wings hyaline, veins and stigma and costa black. Length, 9 mm.

Habitat: Bellfountain, Oregon; A. L. Lovett, collector.

This may prove to be the male of *magnifica*, although it is differently colored.

***Tenthredo remissa* new species.**

Male. Body black with the clypeus, labrum, mandibles, genal orbits, extending slightly onto occipital orbits, dot above each antenna, dot at angles of compound eyes, collar, tegulæ, margins of pronotum, irregular line on mesopleura, pectus, line on metapleura, spot above posterior coxæ, sides of basal plates, coxæ and trochanters and femora of all legs beneath, yellow; tibiæ of

metathoracic legs rufous beneath, their tarsi black, and abdomen beyond middle of second segment, rufous; antennæ with first segment of flagellum longer than second, second and third subequal; frontal furrow shallow; wings hyaline, stigma rufous, costa and veins black. Length, 9 mm.

Habitat: Corvallis, Oregon; received from A. L. Lovett.

This species is near *reposita* from which it can be distinguished by the color of the pleura.

Tenthredo replata new species.

Female. Body black with the clypeus, labrum, mandibles, genal orbits, extending slightly onto facial and occipital orbits, collar, tegulæ, spot on margins of pronotum, band on mesopleura, line on metapleura, spot above posterior coxæ, sides of basal plates, and all the legs beneath, yellow; abdomen beyond the third segment, rufous; antennæ with the first segment of the flagellum longer than the second, second and third subequal; frontal furrow broad, flat; saw-guides straight above, convex below converging gradually to a blunt point above; wings smoky, stigma rufous, veins and costa black. Length, 10 mm.

Habitat: Ormsby County, Nevada; C. F. Baker, collector.

This species is evidently related to *zetes* Kirby.

Tenthredo resegmia new species.

Male. Body black with the clypeus, labrum, mandibles, genal orbits, ventral half of occipital orbits, dot at summit of compound eyes, collar, tegulæ, ventral margin of pronotum, band on mesopleura, small line on metapleura, spot above posterior coxæ, pectus, sides of basal plates, coxæ, trochanters, prothoracic and mesothoracic femora, except above, prothoracic tibiæ, except a line above, their tarsi and mesothoracic tibiæ and tarsi suffused with rufous, yellow; metathoracic femora except above, their tibiæ and tarsi, and the abdomen beyond the basal plates, rufous; antennæ with the first segment of the flagellum longer than the second, the second and third subequal; frontal furrow concave; wings yellowish hyaline, stigma and costa rufous, veins black. Length, 9 mm.

Habitat: Bellfountain, Oregon; A. L. Lovett, collector.

This species is very similar to *messica*.

Tenthredo reperta new species.

Female. Body black with the clypeus, labrum, dot at summit of eyes, inconspicuous, round spot on ventral half of occipital orbits, collar, tegulæ, spot above posterior coxæ, all of front and middle legs beneath, hind tibiæ and tarsi beneath, yellow; antennæ with first segment of flagellum longer than second, second slightly longer than third; saw-guides broad, short, dorsal margin straight, ventral margin and apex broadly convexly rounded, bluntly

pointed; wings hyaline, slightly smoky, stigma rufous, costa and veins black. Length, 10 mm.

Habitat: Julietta and Lewiston, Idaho; J. M. Aldrich, collector.

This species is similar to *alphia* but smaller.

Tenthredo reposita new species.

Male. Body black with the clypeus, labrum, mandibles, ventral portion of facial orbits, connected between antennæ, dot above antennæ, dot at angles of compound eyes, genal orbits, most of occipital orbits, collar, tegulæ, lateral margin of pronotum broadly, pectus, continuous with and covering most of mesopleura, line on metapleura, spot above posterior coxæ, sides of basal plates, front and middle legs, except a black line above, coxæ and trochanters and femora of metathoracic legs, except above, yellow; metathoracic tibiæ and tarsi except above, and abdomen beyond middle of first segment, rufous; antennæ with first segment of flagellum longer than second, second and third subequal; frontal furrow deep; wings hyaline, costa in great part rufous, stigma and veins black. Length, 9 mm.

Habitat: Bellfountain, Oregon; A. L. Lovett, collector.

This species is near *reflua*, from which it can be separated by the coloration of the pleura.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF NOVEMBER 7.

A regular meeting of the New York Entomological Society was held at 8 P.M., on November 7, 1922, in the American Museum of Natural History, Vice-President Harry B. Weiss in the chair, with 12 members present.

On motion by Mr. Woodruff, the Publication Committee was requested to print in each number of the JOURNAL the actual date of issue of the preceding number.

Mr. Davis exhibited 99 species of "Orthoptera of Staten Island" and speaking extemporaneously exhibited a remarkably intimate acquaintance with the taxonomy and life habits of each species. One by one he took up the earwigs, dwelling upon the families of young he had seen, the roaches with descriptions of their nuptial greetings, the sexual differences in the native species, and the conditions under which the introduced species occurred, and the mantids with an account of the successful establishment, through egg masses he had personally distributed, of the Chinese species. Then he spoke of the Walking Stick insects and the curious lack of males of one species and passed next to Katydid and crickets that make the summer and autumn nights so colorful. The decreasing number of true Katydid and the number of pink



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