Some Insects from Steamboat Springs, Colo. - I

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**Thamnotettix gladiola**, n. sp.

Size and form of *longiseta* nearly. Yellowish green with the vertex tinged with orange. Length 4.5 mm.

Vertex broad, rounding, almost parallel margined, very slightly longer on middle than against the eye, twice wider than long, evenly rounding to the moderately sloping face. Face moderately broad, not inflated, margins straight to just before the apex, one-half longer than its basal width. Elytra moderately long, slightly exceeding the abdomen. Venation regular, the outer antepapillar cell variable, rarely not complete.

Colour: Vertex bright lemon yellow, often with an orange tinge. Face yellow, the front tinged with orange, a black spot just outside the lorum. Pronotum pale orange yellow, an arcuated green line on anterior disc. Scutellum lemon yellow. Elytra yellowish green, subhyaline, allowing the black markings on tergum to show through. Tergum and venter often black lined.

Genitalia: Female segment two-thirds as long as its basal width, posterior margin deeply, triangularly emarginate, the emargination starting at the acute lateral angles and extending to one-half the depth of the segment at the truncate apex, where it is one-fifth the width of the segment. Male valve short, obtusely rounding, plates together attenuately triangular, almost twice as long as their basal width, the margins heavily fringed with long hairs which almost conceal two long sword-like black points which extend beyond the plates.

Described from six examples from Dutch George's North Park, and Lizard Head, Colorado, all collected by the author.

**Thamnotettix umbratica**, n. sp.

Form and colour of *cyperacea* nearly, much smaller and with a longer vertex. Pale straw with black dots on the vertex margin and three pale brown stripes on vertex and pronotum. Length, female, 4.5 mm.; male, 4 mm.

Vertex right angled, longer than its basal width, twice as long on middle as against the eye, disc flat, acutely angled with front, the margin slightly rounding. Front narrow, wedge-shaped, nearly twice longer than wide. Pronotum about equalling the vertex in length, elytra moderately long, slightly exceeding the abdomen, flaring. Venation regular, distinct.

Colour: Vertex straw yellow, usually the ocelli and a dot at apex black, a brown median stripe and sometimes a pair of lateral stripes next the eyes black. Sometimes all these markings are obscure. Face pale
straw, sometimes a pair of black spots above the antennæ, another pair below and some smoky arcs on front. The usual black dot outside the lore. Pronotum straw colour, usually with a double median brown stripe and a pair of lateral ones. Elytra straw colour, with the veins light in the female, pale smoky iridescent in the male.

Genitalia: Female segment about half as long as its basal width, truncate posteriorly or slightly emarginate with a faint median production according to the curvature. Male valve triangular, plates together transversely roof-shaped, short, rounding, scarcely as long as their basal width, their apices slightly apart, exposing their pygofer and a dark style-like process.

Described from five examples from Tia Juana, Chino, Pasadena and Stanford, California, all collected by the author.

SOME INSECTS FROM STEAMBOAT SPRINGS, COLORADO— I.
BY T. D. A. COCKERELL, BOULDER, COLORADO.

Steamboat Springs is only about 85 miles from Boulder, as the crow flies. It is, however, far on the western side of the range, in a region hitherto little known to entomologists, because only quite recently accessible by rail. It is situated in a fertile valley, at an altitude of 6,680 feet, and is evidently destined to become a place of considerable importance. I recently spent a day (May 27) collecting there, and present herewith the principal results, not only on account of the general interest they seem to possess, but also in the hope of encouraging the beginnings of scientific activity among the young people of the locality. Most attention was naturally given to the bees.

HYMENOPTERA APOIDEA (Anthophoridae and Megachilidae).

*Emphoropsis Johnsoni* Ckll.—A dead male, being dragged along by an ant.

*Osmia permorata*, n. sp.—Female. Length about 14 mm., robust, dark green, with the legs entirely black; hair of head and thorax above very bright rich fox-red; of first abdominal segment above, and scantily on middle of second, rather paler red; elsewhere, including scopal, the hair is black except some reddish on inner side of anterior tarsi. I had confused this handsome species with *O. novomexicana* Ckll., which it superficially resembles. It is, however, easily separated by the dullish area of meta-thorax, without any pit; the same part in *novomexicana* is smooth and
shining, with a very conspicuous median pit. The third antennal joint is longer than in novomexicana, the marginal cell is longer and more pointed apically, and the outer t. c. is not angulate about the middle. The abdomen is broader and more globose than in neomexicana, and is dark green. The mesothorax is olivaceous. The bright red thoracic hair and green mesothorax will separate this from Cresson's O. longula and juxta; O. longula has the same kind of metathorax, however. The clypeus is black, produced and broadly truncate; the apical tooth of mandibles is very long and sharp, the mandibles are tridentate. O. florissantica Ckll. is also related; it has the area of metathorax shining, but without a well-defined pit; the abdomen is very blue.

The maxillary blade in O. permorata is conspicuously obliquely striate and speckled with black, and the tongue is shorter than in O. novomexicana. In O. florissantica the maxillary blade is dark.

Hab.—Steamboat Springs, Colorado (type locality), May 27, at flowers of Physaria acutifolia Rydb. (Cockerell); Johnson Park, New Mexico, July 4, at flowers of loco weed (Anna Gehrman). I am much indebted to Mr. S. A. Rohwer for notes on my type of O. novomexicana, which is in the National Museum.

Osmia fulgida Cress.—One female.

Osmia globosiformis, n. sp.—One male. Length about 7½ mm., entirely black, except that the hind margins of the abdominal segments are very narrowly rufescent; similar to O. globosa (cf. Psyche, 1907, p. 16), but the pubescence entirely white, not in the least ochreous, except on inner side of tarsi, where it is light yellowish, and the hind basitarsus with a tooth a little beyond the middle; antennae, long, entirely black, third joint a trifle shorter than fourth; eyes black, cheeks broad, mesothorax densely punctured, only in the middle of the disc a little more sparsely; tegulae fuscopiceous; wings stained with reddish; b. n. just falling short of t. m.; first r. n. at end more distant from base of second s. m. than second from apex; sixth dorsal abdominal segment faintly emarginate; seventh bidentate, the teeth very obtuse; second ventral emarginate. This can hardly be the male of O. abjecta, on account of the dull, closely-punctured mesothorax, the entirely dull granular area of metathorax, etc.

Osmia nigrifrons Cress.—One female. This is identical with the "nigrifrons var." of the Boulder County table. It may prove to be a distinct species when the male is known.
Osmia atriventris Cress., var. a.—Two males.

Osmia amala Ckll.—One male. The hind margins of the abdominal segments in this example are not violaceous (cf. Can. Ent., 1909, p. 131); a better character to separate the species from O. integrella is the long, dense, conspicuous fringe in the deep but narrow emargination of the third ventral segment; in integrella the fringe is short and inconspicuous.

Osmia pseudamala, n. sp.—One male. Length nearly 10 mm., superficially similar to O. amala, but very different in details of structure; head and thorax olive green, pleura and mesothorax blue-green; hair thick and long, faintly tinged with ochreous above, some long black hairs on cheeks anteriorly, but none on head or thorax above, or on pleura; mandibles bidentate, the teeth of equal length (in O. vallicola the apical tooth is very long); flagellum 4 mm. long, rather thick, obscure reddish beneath, not moniliform (it is moniliform in O. physariae, chlorops, etc.), much longer than in O. mertensia; tegulae with at least the anterior half green; wings ordinary, b. n. going just basad of t. m.; legs more or less metallic, their hair partly black and partly white; second and third joints of middle tarsi ordinary (not globose or swollen as in O. integrella, etc.); hind tibia thick, with a slender base; hind spurs not at all hooked at end; abdomen shining greenish-blue, the hind margins concolorous; second segment with some black hair, subapically, following segments with much coarse black hair; sixth without evident light hair, but a brush of white hair on middle of seventh, conspicuous in lateral view; sixth segment with a deep semicircular emargination; seventh bidentate, the teeth short, and more or less concealed by hair; venter strongly blue; first segment entire; third with a deep wide emargination, fringed with pale yellowish hair, the fringe long at sides, but even, without any long falciform portion such as is found in O. seneciophila and brevis. The hind basitarsus is not toothed (it is toothed in O. Wheeleri, enena, aprilina, Pasadenea and olivacea).

Osmia eutrichosa, n. sp.—One male. Length about 8½ mm.; dark bluish-green, the abdomen shining, the whole insect unusually hairy, the hair dull white, faintly ochreous dorsally, no black anywhere; legs black with light hair, the hind femora faintly submetallic; antennae ordinary, flagellum truncate at apex, more or less stained with ferruginous beneath; tegulae green in front; wings normal, b. n. meeting t. m.; middle tarsi normal, very hairy; claw-joints ferruginous; hind basitarsus unarmed;
abdomen rather indistinctly subfasciate, apical margins of segments coloured like the rest of the surface; sixth segment with a very small notch; seventh bidentate, the teeth short and broad; genitalia nearly as in O. inurbana, which belongs to a different group; third ventral segment formed and fringed nearly as in O. pseudamala. The abdomen has only piliferous punctures. Easily known from O. Ramaleyi by the longer, yellowish-tinted hair on the apical half of the abdomen. The female doubtless has a light scopa.

SOME HULST TYPES OF GEOMETRIDÆ AT WASHINGTON.

BY RICHARD F. PEARSSALL, BROOKLYN, N.Y.

A recent visit to the U. S. Nat. Museum, at Washington, for the purpose of studying types of this family, contained in its collections, disclosed some facts which it seems advisable to record. The following were deposited by Dr. Hulst:

*Tephroclystis niveifascia.*—Type No. 3920 is the specimen recorded by him as coming from Oregon. It bears the label “Koebele, Oregon,” only, and is not conspecific with the one in the Hulst collection at New Brunswick, which, in a former paper, I have already stated, finds its place under the genus Nasusina Pears., and will now constitute the type of the species. Among material submitted to me some time ago, and returned to the Museum at this time, I had described as new a single specimen, under the name, *Eup. segregata*, n. sp., which seems to be the same as the Oregon type, and I have therefore transferred the name to it, Dr. Dyar having generously permitted me to retain as a co-type the second specimen of segregata, a description of which will be found in a forthcoming paper.

*Tephroclystis plumbaria.*—Type No. 4701 is a fine female example of *Eup. miserulata* Grote, labelled Washington, D. C., July 5th.

*Tephroclystis plenoscripta.*—Type 4702 is the true type recorded from Yellowstone Park, Wyoming. A specimen from the same locality is in the Hulst collection at the Brooklyn Institute Museum. The latter represents the usual appearance of specimens, the type being an unusually clear, distinctly-marked example.

*Tephroclystis pilobilis.*—Type No. 4920, recorded from Alaska, is a silky-gray species, with the same general appearance as *bivittata* Hulst, September, 1910
but having the subterminal white line heavy and clear, and the veins sparingly black-scaled in central field.

_Tephroclystis perfusca._—Type No. 3919 is the specimen referred to in his description, as coming from Utah (June), and must carry the name henceforth. The other type specimen from Easton, Oregon, now in the Hulst collection at New Brunswick, besides being not of the same species, is excluded by a previous writer, Mr. Geo. W. Taylor (CAN. ENT., Vol. XL, page 58), and his dictum must prevail, according to the rules. It is fortunate that he chose this species, for Dr. Hulst's description was evidently drawn from it, and fits exactly. Last year I received from Mr. Tom Spalding nine specimens like it, taken at Provo, Utah, all in good condition, as is the type. The wings are large and thin, with very indefinite markings, powdered with dusky atoms; and the inference which Mr. Taylor drew from its appearance, that it was beyond recognition, because "not in the best condition," as he puts it, is quite a mistake. All of my specimens are fresh, and resemble it exactly. His arbitrary selection of a common species from the Northwest, as representing _perfusca_, because of the imperfect condition of both types, as he states, is altogether unwarranted in view of the ease with which the real species can be determined, once we have the material at hand. I have deposited one of my specimens with the type in confirmation of my statements.

_Tephroclystis acutipennis._—Type No. 3954 is a good representative, and even rubbed examples are easily identified by the broad brown lines bordering central field within and outwardly, at inner margin, running toward apex to centre of wing.

_SELiduema lachrymosum._—Type from Los Angeles Co., Calif., is the female of _Hulstina Packardaria_ Hulst, which was described from four males. _S. homopteroides_ Hulst, type a female, is already correctly placed by Dr. Dyar in his "List" as a synonym of _lachrymosum_.

The Editor will be glad to receive for publication short notes on the capture or occurrence of rare or otherwise interesting insects, particularly from Canadian localities. Details of habitat, manner and circumstances of capture, etc., will be appreciated, and such information will be acceptable, even when relating to captures, the bare records of which have already been published.