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Notes on American Bees

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Panurginus pauper var. flavotinctus, Ckll. — Prof. C. H. T. Townsend took two males at Dripping Spring, Organ Mountains, N. M., Aug. 10th. I formerly thought they might belong to P. asteris, Rob. The female of flavotinctus, taken at Santa Fé in August, differs from the male in the broader flattened abdomen, and the wholly dark face. It will be distinguished from the female of albitalis by its small size (about 5 millim.), and the flagellum being ferruginous beneath the fourth segment.

Panurginus albitalis subsp. fortior, subsp. nov.

About 6½ millim. long. Differs from Santa Fé albitalis in being more robust, with a broader abdomen, having indeed the build of a female rather than of a male. Wings quite clear; stigma and nervures rather pale brown; face-markings a deep chrome-yellow, whereas in the Santa Fé insect they are pale lemon-yellow. Flagellum entirely black.

Hab. Mesaleno, N. M., July 22nd, 1898. (C. M. Barber.) This is probably a valid species.

Panurginus barberi, n. sp.

LENGTH about 7 millim., black, with a thin short greyish pubescence, making the insect appear dusty; abdomen narrow with subparallel sides; head, mesothorax, and scutellum with large and rather dense punctures, not dense enough, however, to obscure the shining surface; metathorax with its middle part shining and impunctate, its lower with a narrow transverse channel crossed by little ridges at frequent intervals; abdomen shining, with only a few small scattered punctures at the sides of the first segment, the other segments with the anterior half rather thickly but minutely punctured; antennae entirely black; face scarcely hairy, clypeus (except two black dots, and the pale brown anterior margin) and lateral face-marks bright lemon-yellow; lateral marks rapidly narrowing above the level of the clypeus, ending in a sharp point (at an angle of about 45°) on the orbital margin just below the level of the antennae; labrum mostly yellow; mandibles simply yellow at base, otherwise reddish brown; with a conspicuous tuft of hair on the lower margin about the middle; tubercles yellow with a hyaline spot; tegulae testaceous: wings smoky, especially on the apical margin, nervures and stigma piceous; marginal cell with a long appendiculate nervure; second submarginal cell receiving the recurrent nervures near the end of its first and beginning of its last fifth; legs black, bases of last four Tibiae, all the knees, basal two-thirds of anterior Tibiae in front, and basal joints of all the tarsi, pale yellow.

Hab. Mesaleno, New Mexico, July 12th, 1898. (Chas. M. Barber.) In my table of Calliopsis and Panurginus this runs to P. bidentis, Ckll., but it will be easily known from that by its larger size, and the absence of the strong yellowish tint of the wings.

Calliopsis obscurellus, Cresson, 1879.—Three males and three females from Pasco, Wash., May 25th, 1896. (T. Kincaid.)

(To be continued.)
appears about the central shadow, such as accompany the move-
ments of the legs.

* Gerris can also, by a powerful stroke of one of the inter-
mediate legs, perform side-movements with perfect ease, and
even turn right round, executing strategic movements to the rear
with great agility.

The other active movement is the leaping, whereby the bugs
tear themselves loose from the surface of the water and make a
powerful stroke of one of the inter-
vite: with live movement is the leaping, whereby Jhe 
legs of inches on the water, but on
dry land it exceeds this to some extent, springing up into the air. According to Meinert, it
spring to a greater
surface of the water,
can leap right out of the net voluntarily enter beneath. The
must expose it to the requedi disturbances and swamped. The
short, close, velvety pubescence -if it be in good and clean con­
aelveston wtoe t~~g surface unharmed, breaking the
are thus a e
black. Head broader than ~~~1g, ii:::e~:e1t rather ~ense and strongly
concave ; face with short w l e pi~h rather 'strong punctures, more or
plumose at the sides_; c ypeus w 'tl arse pnuctures of two sizes;
Gerris

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(To be continued.)

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BY T. D. A. COCKERELL,
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(Concluded from p. 129.)

Colletes nautlanus, n. sp.

2. Length about 9½ millin., rather broad and compact, shining
black. Head broader than long, inner orbital margins quite strongly
concave ; face with short white pubescence, rather dense and strongly
plumose at the sides; clypeus with rather strong punctures, more or
less running into stripe; vertex with sparse punctures of two sizes;
many black, strongly plumose hairs behind ocelli; cheeks with white
pubescence; antennae short, entirely black, scape punctured;
* The elytra are provided with short close hairs along the nervures, but,
despite this, they are apt to become soaked and unmanageable when swamped
with water; and this is one of the reasons why I have considered (late,
with water; and this is one of the reasons why I have considered (late,
with water; and this is one of the reasons why I have considered (late,

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with the anterior margin not emarginate; labrum with a row of weak
pits; apical portion of mandibles dark reddish; space between base of
mandible and eye very short, almost reduced to nothing; mesothorax
with large and very strong punctures, dense in front, less so behind,
hind part of disc without punctures; scutellum impunctate in front,
with large punctures behind; post-scutellum coarsely roughened;
basal enclosure of metathorax narrow, bounded by a sharp rim, and
crossed at intervals by sharp ridges; posterior face roughened, almost
malleate; pleura with very dense large punctures; prothoracic spine
long and sharp; pubescence of thorax white at sides, dense on
tubercles and on sides of metathorax, black just beneath the tegula,
on dorsum thin but strongly plumose, black mixed with greyish white,
the white conspicuous at the suture between mesothorax and scutellum
and (greyish) on post-scutellum, the black most conspicuous on the
scutellum; tegula shining piceous; wings hyaline, nerved and
stigma black; stigma small, marginal cell with an appendicular ner-
vure, second submarginal cell about as long as third, third narrowed
about one-half to marginal, second recurrent nerved strongly bent;
legs with white pubescence; hind femora with an abundant, white,
beautifully plumose floscus; second joint of hind tarsi triangular;
abdomen broad, very shiny, minutely but strongly and quite closely
punctured, except on anterior part of disc of first segment; segments
nude, except very narrow snow-white apical bands, and white hair at
base and sides of first segment, and a few scattered black hairs on the
apical segments; venter with a very thin hoary pubescence.

Hab. San Rafael, on the Rio Nautla, State of Vera Cruz, Mexico, last of June. (C. H. T. Townsend.) This has less
black hair than C. ethiops, and the abdomen is not "rapidly
narrowed to apex." It has no trace of the dense ochraceous
pubescence found on the breast of C. mexicanus. Curiously,
C. nautlanus has a very strong resemblance to C. nudus, Rob.,
from Illinois, differing, however, by the shining and closely
punctured abdomen.

Colletes gilensis, Ckll. — 2. Prude's Summit, White Moun-
tains, N. M., July 29th, 1898. (C. M. Barber.) Prude's Summit
is not on the map; it is the top of the divide between Ruidoso
and Mescalero.

Colletes bigelowia, Ckll. — 2. Prude's Summit, White Moun-
tains, N. M., July 29th, 1898. (C. M. Barber.) My original

types were badly worn; a new specimen, in excellent condition,
has a shiny black abdomen, with very distinct but narrow snow-
white bands on the apical margins of the segments, interrupted
in the middle on the first. The punctures of the abdomen are
very much smaller than in C. gilensis. The third discoidal cell
is much less bulging at its end than in C. nautlanus.

Nomada edwardsi, Cresson, 1878.—Mr. T. Kineaids sends me
eighteen specimens; three from Seattle, Wash.—two males, May
18th, one female, May 17th, 1896; the rest from Olympia,
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Wash., May 11th and 23rd, and June 24th—mostly females. Cresso.n's description, though stated to be of a male, applies to the female. The male has the mesothorax all black, the scutellum with only a pair of yellow spots, the post-scutellum black, the yellow spots on metathorax smaller, and the black bands on the abdomen broader. The basal portions of the legs are largely black, where in the male of N. superba they are red. The flagellum of male edwardsi is black above and red beneath, and this is the only red about the insect.

Nomada maculata, Cresso.n, 1863.—Mr. T. Kincaid takes at Seattle and Olympia, Wash., May 23rd—June 25th (the last date being that of a Seattle male), a species which agrees with maculata, but is 10 millim. long or slightly over. Robertson, in Illinois, found the insect to not exceed 8 millim. in either sex; but I have a female from Franklinville, Pa., May 19th, identified as maculata by Mr. Fox, which is quite as large as the Washington form. The mandibles are bidentate, and the last abdominal segment in the male is bifid, as Robertson indicates.

Sphecodes dichrous, Smith, 1863.—Mr. T. Kincaid sends me very numerous examples from Olympia, Wash., mostly taken in June, the dates running from May 25th to July 2nd; also a few from Seattle, Wash., one as early as April 17th; also one or two from Pasco, Wash., May 25th; and a somewhat larger and darker individual (female) from Comano I., Wash., collected by N. L. Gardner, May 25th, 1896. It would be interesting to ascertain whether the Comano I. specimens are uniformly of the same size and dark colour, constituting a local race.

Bombus nevadensis, Cress.—Mescalero, Indian Agency, N. M. (Otis).*

Bombus ternarius, Say.—One from Seattle, Wash., April 3rd, 1897. (T. Kincaid.) The pubescence of the head is mostly black.

Bombus sonarum, Say.—Forks of Ruidoso Creek, N. M., July 80th. (C. M. Barber.) Also taken by Prof. C. H. T. Townsend. New to the United States.

* The Mescalero Indian Agency, on Tularosa Creek, N. M., is an interesting locality for bees. In addition to the species mentioned in the body of this article, Mr. C. M. Barber took the following at the Agency in July, 1898:

from that in being smaller (length 10 millim.), no black hair on vertex, flagellum wholly black, dark hair of mesothorax and scutellum dark brown instead of black, stigma less developed and piceous, bases of third and fourth abdominal segments with scanty hair which is entirely black, apical bands of pubescence on second to fourth segments white and well-defined. The hair of the last two abdominal segments is black, except at the extreme sides, and the brush of the hind tarsi is orange-fulvous.

This female is referred to crenulaticornis instead of to ruidosensis, on account of its small size, and also because the venation is as in the former species, whereas ruidosensis has a much larger second submarginal cell.

Alcidamea simplex (Cresson).—This is the Heriades simplex, Cress., and the Alcidamea producta, Cress., the former specific name having priority.

Megachile relativa, Cresson, 1878.—One female. Forks of Ruidoso Creek, N. M., July 30th, 1898. (C. M. Barber.) New to New Mexico.

Megachile wootoni subsp. calogaster (Ckll.).—When describing M. calogaster I omitted to notice the close resemblance between its male and that of M. wootoni; they may be separated thus:

Spurs of hind tibiae ferruginous; vertex more closely punctured . . . . wootoni.
Spurs of hind tibiae piceous; vertex less closely punctured . . . . calogaster.

The two are doubtless geographical races of one well-marked species.

Megachile sidalcue, Ckll.—A female was taken by Mr. C. M. Barber in Mesilla, N. M., July 4th, 1898. It resembles the male except in the usual sexual characters. The face has short white hair instead of a dense pale yellow brush; the ventral scopa is white, with a few black hairs at the extreme tip.

Megachile casade, Ckll.—Mr. C. M. Barber took a female in Mesilla, N. M., July 4th, 1898. It resembles the male except in the usual sexual characters. The ventral scopa is white, even to the tip.

Megachile fidelis, Cr., var. n. concinnula.

3. Length about 9½ millim., black, with thin dull white pubescence. Head large, a little broader than thorax, eyes mottled, facial quadrangle a little longer than broad, narrowing below; face, including clypeus, densely covered with yellowish-white hair; vertex dull, strongly punctured, with erect hairs, some of which in certain lights seem black, but this is deceptive; cheeks with thin white pubescence, a dense tuft behind near base, but the area above the base of mandibles is hairless; antennae black, last joint not broadened; mandibles striato-punctate, black, fringed beneath with orange-fulvous hair; a tooth behind mandibles; mesothorax and scutellum dull, with numerous shallow punctures, thinly clothed with erect dull white hair; no bands of pubescence at sutures; tegulae piceous; wings dusky, darkest at apex, nervures brown, second submarginal cell receiving first recurrent nervure almost at its extreme base, and the second very near its apex; legs black, pubescence on femora white, on tibiae short, thin, and fulvous; spurs light ferruginous; the four hind tarsi ordinary, the pubescence on inner side of hindmost strongly orange-fulvous; anterior femora ordinary, black, with long white hairs; anterior tibiae black, with a short sharp spine at apex; anterior tarsi honey-colour inclining to ferruginous, last joint and apical half of the one before fuscous; first joint deeply hollowed, canoe-shaped, produced and somewhat curved at end, its rounded apex resembling a finger-tip; inner margin of the hollow with a continuous fringe of short black hairs, outer margin darkened, but having only fulvous hairs; hind margin with the usual long fringe of white hairs, none of which are black at ends; second and third joints flattened, with a conspicuous dark spot beneath; fourth joint simple; anterior coxae with a long spine, no patch of bright hair near its base; middle coxae unarmed; abdomen short, well punctured, with rather long thin dull white hair on basal segment above and beneath, but not at sides, and more or less on sides of ventral segments to the apex; hind margins of second to fourth dorsal segments with a narrow yellowish hair-band, very well defined; last segment concave in the middle, its margin with a deep but rather narrow emargination, the margin on each side of this minutely denticulate; the subapical ventral teeth obsolete.

Hab. Colorado Springs, Colorado, middle of July. (Ckll. 3558.) Differs from fidelis in the face being more narrowed below and the venation. Mr. Fox has also seen this variety from California.

Mesilla Park, New Mexico, U.S.A.

THE GENUS LEUCERONIA OF AURIVILLIUS.

By A. G. BUTLER, Ph.D.

In a paper upon the African genera of Pieride (Ent. Tidskr. 1895, p. 256), Prof. Aurivillius places Teracolus next to his new genus Leuceronia, under a section having only eleven veins to the front wings. Had the author consulted a paper which I wrote some years previously, "On the inconstancy of a generic character in Nepleronia arabica" (Ent. Mo. Mag. 1886, p. 259) he would have discovered that the eleven-vein peculiarity which exists in some examples of L. buquetii and its racial or seasonal forms was altogether abnormal.