

riorly white, two laterally brownish. Scutellum covered with a very fine gray pubescence, posterior margin with a few white bristles. Pleuræ and coxæ densely covered with white pubescence. Abdomen black, first segment with dense gray pubescence, following segments with a blackish-brown dust, posterior margins gray, the few hairs white, ventral segments grayish-white. Wings glossy-hyaline, veins brownish. Legs black, except from tibiae in about basal two thirds and middle tibiae narrowly at base yellowish; hairs not very abundant, white, bristles white. Length 8.5 mm.

Huachuca Mts., Arizona. (Schaeffer). One male in excellent condition.

This neat little species differs principally from those so far known by the coloration of the abdomen and legs.

*Eccritosis amphinome* Walker.

Of this handsome species I have taken a female in the Huachuca Mts., Arizona. It is reported in the Aldrich catalogue from Lower California, Mexico, Guatemala and Honduras.

*Erax subcupreus* new species.

Head grayish-white pollinose, except the facial tubercle, which is almost without pollen and shows the brownish-submetallic ground color; mystax with white and black hairs and bristles; occipito-orbital and ocellar hairs and bristles black; beard white; palpi black, with black hairs and bristles. Thorax brownish-metallic, with grayish-white and brownish-gray pollen; median line with a rather dense crest of erect, black hairs, which does not extend to the scutellum, between the crest and the scutellum are moderately long, white hairs, intermixed with some black bristles. Scutellum somewhat densely clothed with moderately long white hairs and along the apical margin with some black bristles. Pleuræ feebly pollinose and with sparse darker and white hairs. Abdomen black with very faint brownish-metallic tint, segments one to five with long white hairs, parted at middle and directed outwards, those on the first segment are only on the thickened apical margin and on the second covering about apical third of the segment; segments six and seven grayish-white pollinose and covered with shorter white hairs. Hypopygium black with sparse gray and blackish hairs. Venter clothed with long white hairs which become shorter on the apical segments. Wings hyaline, slightly smoky towards the tip; costa distinctly thickened and dilated. Femora black with brownish submetallic tint, tibiae brownish, at tip black, tarsi black; femora and tibiae clothed with moderately long, white and gray hairs. Length 18 mm.

A single male from Prescott, Ariz., received from George Franck.

Apparently related to *E. costalis* Will. but with abdominal segments one to five, with long, white hairs. Williston, in his synoptic table of the species of *Erax*<sup>1</sup> gave the name *costalis* but neglected to

<sup>1</sup> Trans. Am. Ent. Soc., Vol. XII, p. 64.

length, long, the postmarginal obsolete or nearly. Marginal fringes of fore wings a little longer than normal (that is, not extremely short). Fore wing densely ciliate. Ovipositor extruded for a length equal to three fourths that of the ovate abdomen. Axillæ united acutely. Propodeum cross-linear mesad, much longer laterad.

*Ameromyzobia aphelinoides* new species. Genotype.

Female.—Length 0.90 mm., excluding the ovipositor.

Golden yellow, the wings slightly infuscated throughout, the distal half of the abdomen, the funicle, the propodeum except mesad and the extruded valves of the ovipositor, dusky or black. Scutum and scutellum with sparse, rather long, black setæ. Funicles one to two subequal, each not quite twice longer than wide, a little shorter than the pedicel, three a little shorter than two. Club definite, slightly wider than the funicle and nearly as long. Second ring-joint a little larger than the first, both wider than long.

The male appears to be similar but no perfect specimen at hand.

From one pair in the U. S. National Museum from St. Vincent, West Indies (H. H. Smith).

Type.—Catalogue No. 20294, U. S. National Museum, the female on a slide.

## TWO NEW CICADAS BELONGING TO THE GENUS OKANAGANA.

BY WM. T. DAVIS,

NEW BRIGHTON, STATEN ISLAND, N. Y.

Through the courtesy of Mr. Edward P. Van Duzee I am enabled to describe a new species of *Okanagana* from Oregon. The fifteen specimens examined came originally from the Oregon Agricultural College and Experiment Station, Corvallis, Oregon.

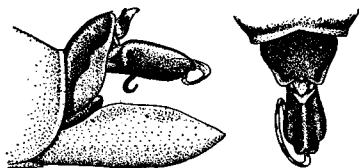
*Okanagana oregona* new species.

Type male, Mary's Peak, Oregon, July 18, 1903. Davis collection.

Allotype female, Corvallis, Oregon, June 4. Collection Edw. P. Van Duzee.

Head as broad as the front margin of the pronotum; front not much produced. Median sulcus of the front deep and well defined. Pronotum with the humeral angles rounded and the anterior angles rather prominent. Opercula oblique with the extremities not as rounded as in some species of the genus. Last ventral segment with the base about as long as the sides which gradually converge to the rounded extremity. Uncus when viewed in profile

sinuated but not hooked at the end; when viewed from above broadened out



and then constricted before the extremity which is notched. Basal areole of the fore wings clear or very little clouded, oblong, square at apex. Costa of the fore wings yellowish to beyond the middle, then fuscous; flaps at base of wings bright red; the dark clouded spot at base of cubital cell, common to many species, is not present, there is, however, the usual black spot at the extreme base of the wing. Hind wings entirely bright red at base, the red edged outwardly with irregular clouded spots. The dorsum partly covered with short golden hairs, especially on the abdomen, while the underside is clothed with rather long silky hairs. Head black with the supra-antennal plates, a band, expanded at the extremities extending transversely before the front ocellus, and the median groove leading from the ocellus to the hind margin, yellowish. Beneath, the head is black in the region of the transverse rugæ, margined with yellowish. Pronotum black, margined all around, but very narrowly in front, with yellowish. Metanotum black, posteriorly margined with yellowish. Dorsum of the abdomen black, the segments edged posteriorly with reddish. Uncus black. Beneath, pale, including the valve, with black spots and stripes about the legs. There are some conspicuous black markings at the base of the abdomen, and more than the terminal half of the rostrum is shining black.

MEASUREMENTS (IN MILLIMETERS).

	Male type.	Female allotype
Length of body .....	20	19
Width of head across eyes .....	6	6
Expanse of fore wings .....	48	50
Greatest width of fore wing .....	8	8.5
Greatest width of operculum .....	2.5	
Length of valve .....	4	

In addition to the type which is figured and allotype, the following specimens have been examined: Corvallis, Oregon, June 29, 1896, female; June, 1906, male (Buchanan); May 27, female (Currin); July 9, male; August, female. Mary's Peak, Oregon, July 18, 1903, three males (Gellatly). Eugene, Oregon, June 10, 1905, male (Foster). Crooked River, Oregon, June 23, 1906, male and female in copulation; also female marked 1906. Philomath, Oregon, September 14, 1906, male.

Accompanying these specimens there is a pupa 20 mm. in length and 6 mm. across the eyes. It is an *Okanagana* pupa and probably belongs to this species. The long series of specimens shows this to be a distinct species. It is not the *Cicada occidentalis* described by Francis Walker in *The Naturalist* in Vancouver Island and British Columbia by John Keast Lord, London, 1866, which is a much larger insect with different markings.

From the collection of the University of Kansas I have received for study through the kindness of Prof. S. J. Hunter and Mr. R. H. Beamer, a female *Okanagana* that differs considerably from other members of the genus known to me.

*Okanagana rotundifrons* new species.

Type, female, Congress Junction, Yavapai Co., Arizona, July (F. H. Snow).

A shining black and yellowish species with a conspicuously blunt and rounded front.

Head as broad as the front margin of the prothorax; the front blunt and rounded; the median sulcus broad and shallow. Pronotum with the humeral angles rounded, and the anterior angles both rounded and deflexed. The last ventral segment is broadly and deeply notched. Fore wings with the basal areole oblong, square at apex, and very clear; venation, including the costal and subcostal veins, shining black, except along the inner margins of the costal and subcostal veins and at the base of the wings, which is straw colored. Flaps of the fore wings pinkish in color; of the hind wings also pinkish but including a fuscous dash. Head above shining black, the supra-antennal plates yellowish except close to the eyes and the transverse groove above the front also yellowish. The front is shining black except a well defined line bordering the sides at the edge of the transverse rugæ. Pronotum shining black, the hind margin and median sulcus yellowish, the remainder of the surface intricately mottled with yellowish and black. Mesonotum shining black, with the hind margin narrowly yellowish, also a yellowish spot near the base of each fore wing. The W-mark is nearly obliterated, only the outer lines showing faintly. Metanotum black with the posterior margin yellowish. Dorsum of the abdomen shining black with the hind margins of all the segments edged with yellowish. Beneath, the legs are black, touched, particularly at the joints and narrowly along the sides, with yellowish; each abdominal segment is shining black at the base and yellowish on the posterior margin. The yellowish areas, both above and below, are also shining.

MEASUREMENTS (IN MILLIMETERS).

	Female type.
Length of body .....	25
Width of head across eyes .....	8
Expanse of fore wings .....	71
Greatest width of fore wing .....	11.5

While the type is so far the only known specimen, this species may be easily separated from all the other described members of the genus by the peculiarly blunt and rounded front and shining black and yellowish surface.

EXPLANATION OF PLATE II.

Fig. 1. *Okanagana oregona* Davis. Type.

Fig. 2. *Okanagana rotundifrons* Davis. Type.

Fig. 3. *Okanagana rotundifrons* greatly enlarged to show rounded front.

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LOUIS H. JOUTEL.

Entomologists will learn with regret of the death of Mr. Joutel at his home in New York City on September 6, 1916. He was well known as a natural history artist whose work was remarkable for its accuracy, and as a careful student of insects. He faithfully served the New York Entomological Society in many ways and for some years was its treasurer, until failing health prevented further activities. A more extended account of his work will be published in a future number of the Journal.

CHRISTOPHER H. ROBERTS.

As we go to press we learn of the death, on September 29, at Pawling, N. Y., of Christopher H. Roberts, a former president of the New York Entomological Society, and one of our best known members. A more detailed notice will appear in a later issue.

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