

TWO NEW CICADAS FROM LOWER CALIFORNIA, MEXICO.

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The descriptions here presented have been made possible through the kindness of Professor Myron H. Swenk, of the University of Nebraska, who has permitted me to examine a number of interesting species from the collection of that institution.

In the Transactions of the Maryland Academy of Science, 1892, p. 163, Prof. P. R. Uhler described *Tibicen blaisdelli* from the vicinity of San Diego, California. Distant later placed the species in his genus *Okanagana*, of which he designated *rimosa* Say as type.

In "A Preliminary List of the Hemiptera of San Diego County, California," Transactions of the San Diego Society of Natural History, Vol. 2, p. 47, October, 1914, Mr. E. P. Van Duzee described *Okanagana distanti* with varieties *truncata* and *pallida* as closely related to *blaisdelli*. The type locality for *distanti* and varieties is San Diego, Calif., and vicinity.

In "A Preliminary Review of the West Coast Cicadidæ," Journal N. Y. Ento. Society, Vol. XXIII, p. 31, March, 1915, Mr. Van Duzee proposed the genus *Clidophleps* to include the known species *blaisdelli* Uhler, and *distanti*, the latter being designated as type. In the original description of *blaisdelli* in 1892 Uhler pointed out the peculiar form of the radial and adjoining cells and stated that a new genus might be erected, the "elongation and expansion of these cells" suggesting a close relation with *Platypedia*.

The original description of *blaisdelli* contains the following: ". . . the radial cell large, wide, reaching beyond the middle of the wing-cover and its bent apex forming the base of three ulnar cells, the cell below the radial one [median] is narrow throughout one half of its length, and beyond this it is greatly expanded towards its triangular tip, the cell next below this [cubital] is shorter, but quite wide, with its inner vein strongly arched, and with a kind of triangular fuscous nodus bounding its outer end." In *C. distanti* as well as its varieties ". . . the greatly thickened and nodose transverse vein

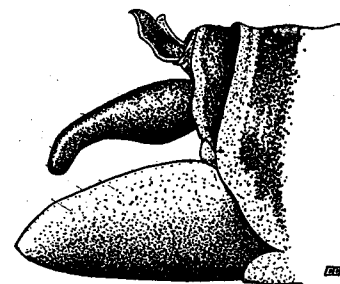
at the apex of the clavus" is a prominent feature according to Van Duzee.

The following, while clearly a *Clidophleps*, lacks some of the prominent characters of the two species of the genus so far described.

Clidophleps astigma new species.

Type, male, San Fernando, Lower California, Mexico, May, 1889 (W. E. Bryant). Collection, University of Nebraska.

Head as broad as the front margin of the pronotum; front considerably produced, much more so than in *distanti*. Median sulcus of the front well defined. Pronotum with the humeral angles rounded; the anterior angles also rounded and rather prominent. The opercula with the extremities rounded. Last ventral segment rounded and slightly emarginate at apex. Uncus when viewed in profile bent downward at extremity and deeply sinuated on the lower



Clidophleps astigma

surface of the apical half. Basal areolæ of the fore wings clear. Costa of the fore wings narrowly margined with brown, membranes orange. Hind wings with membranes lighter colored and clouded. The fore wings are proportionately narrower than in *distanti*, the costal margins are more evenly curved, the central portions are not so much bulged outward, or upward if the wings are expanded, and the "triangular fuscous nodus" at the outer end of the cubital cell is reduced to a mere thickened vein. Head black with the supra-antennal plates and triangular area behind the middle ocellus yellow. Beneath, the head is black margined with yellow on each side of the transverse rugæ. In some of the paratypes the median sulcus is yellowish. Pronotum narrowly margined with yellow and with a narrow yellow stripe about one millimeter in width extending from the front margins to the hind margin, on either side of which there is a large irregular brownish colored area clouded along the depressions. Mesonotum black with an irregular yellow spot near the base of each fore wing; the mesothoracic cross is yellowish, as are two narrow and curved spots near its front extremities. On either side between the cross

and the spot at base of wing there is an elongate spot in the type and paratypes not present in any specimens of *blaisdelli* or *distanti* so far examined, nor mentioned in the description of those species. The W-mark at the fore margin has but the outer lines present. Metanotum black, the hind margin and sides yellowish. Dorsum of the abdomen black with the hind margins of all of the segments edged with yellow. Beneath, the legs are yellow lined with black on the tarsi, tibiae and femora, the fore tibiae being nearly all black. Each abdominal segment is black centrally at base and yellowish on the posterior margin and sides, each yellow side area includes a clouded spot. The last ventral segment has the posterior half yellow and the valve is yellowish clouded centrally with fuscous.

MEASUREMENTS (IN MILLIMETERS).

	Male Type.
Length of body	21
Width of head across eyes	6
Expanse of fore wings	54
Greatest width of fore wing	8
Greatest width of operculum	1.5
Length of valve	3.5

In addition to the type, three other males collected at the same locality and at the same time have been examined. The smallest has an expanse of wings of 44 millimeters but otherwise closely resembles the type. The almost total obliteration of the stigma at the end of the cubital cell will serve to separate this species from the two others in the genus. It also has narrower fore wings and more prominent front than *distanti*, and the veins of both pairs of wings are not as stout and black as in *blaisdelli*. As San Fernando in Lower California, Mexico, is only a little over two hundred miles south of San Diego County, California, *C. astigma* will very likely be found within the limits of the United States.

The following additional records of specimens of *Clidophleps* in the author's collection or examined by him may be of interest.

C. blaisdelli Uhler.

San Diego Co., Calif., June 20, 1913. Mr. Van Duzee states that this specimen was collected at Alpine from the chaparral. It is figured on plate 2. fig. 1.

C. distanti Van Duzee.

San Diego Co., Calif., May 24, 1914, four males, July 22, 1914, female (E. P. Van Duzee).

C. distanti var. *truncata* Van Duzee.

San Diego Co., Calif., June 28, 1913, male cotype (Van Duzee); San Diego, Calif., June 27, 1915, male (W. S. Wright); San Diego, Calif., male.

C. distanti var. *pallida* Van Duzee.

San Diego Co., Calif., June 14, 1913, male cotype (Van Duzee); Sequoia Nat. Park, Calif., August 6, 1915, 1,700 ft. two males (J. C. Bradley).

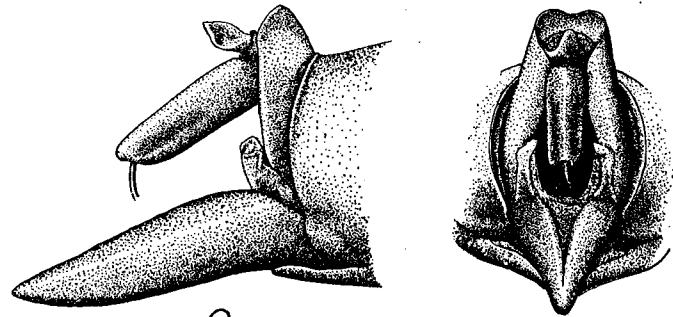
I am indebted to Mr. Van Duzee for identified specimens of his *C. distanti* and its varieties, also for the loan of the male *C. blaisdelli*.

One of the most noticeable species of *Okanagana* that we have seen is represented in the collection of the University of Nebraska by four individuals, three males and a female, all bearing the locality label "Lower California?" From its colors the species is probably an inhabitant of an arid or semi-arid region.

Okanagana aurantiaca new species.

Type male and allotype female from Lower California? Collection, University of Nebraska.

Head rather small and not quite as broad as the front margin of the pronotum; front moderately produced. Median sulcus of the front well defined. Pronotum with the humeral angles rounded and the anterior angles rather prominent. Opercula with the extremities rounded, especially on the outer side. Uncus when viewed in profile not hooked at the end; when viewed



Okanagana aurantiaca

from above tapering to the extremity. The last ventral segment in the type is rounded at the extremity, also in one of the paratypes, while in the other paratype, it is not so much rounded and is sinuated. In the allotype the last ventral segment is broadly and deeply notched. Basal areolæ of the fore

wings clear. The veins of both the fore and hind wings are orange in color except those of the marginal cells which are inconspicuously darkened; the membranes at the base of both pairs of wings are also orange colored and only slightly brighter colored than the veins. The head is orange both above and below, with a fuscous spot on the front and a broken black band extending between the eyes; the tip of the rostrum and the terminal joints of the antennae are fuscous. Pronotum orange with four linear fuscous marks, on each side of the median groove anteriorly, and two dots centrally near the posterior margin. In one of the paratypes the two anterior streaks are wanting. Mesonotum orange with a central broken band of black extending on to the mesothoracic cross; anteriorly there are about three irregular clouded fuscous spots on each side of the central, blackened area, and near the base of each fore wing there is a black streak. Metanotum orange blackened near the base of each hind wing, and with a central black spot, a continuation of the dorsal band of the mesonotum. Dorsum of the abdomen orange with a median black spot on each segment, the spots gradually growing smaller toward the extremity of the body. Beneath orange with two inconspicuous black spots at the base of each wing, both the fore and hind pairs, also small and inconspicuous fuscous spots near the base of the legs. There is a dark cloud centrally at the base of the abdomen beneath, except in the allotype, which has the abdomen all orange. All of the legs are orange except the claws, which are fuscous.

MEASUREMENTS (IN MILLIMETERS).

	Male Type.	Female Allotype.
Length of body	23	23
Width of head across eyes	6	6
Expanse of fore wings	52	64
Greatest width of fore wing	9	10
Greatest width of operculum	2.5	
Length of valve	5	

A glance at this insect gives one the impression of an entirely orange-colored cicada with a black band between the eyes, and a conspicuous dorsal band of the same color extending from the hind margin of the pronotum to the end of the abdomen.

EXPLANATION OF PLATE 2.

- Fig. 1. *Clidophleps blaisdelli* Uhler.
 Fig. 2. *Clidophleps distanti* var. *truncata* Van Duzee.
 Fig. 3. *Clidophleps astigma* Davis.
 Fig. 4. *Okanagana aurantiaca* Davis.

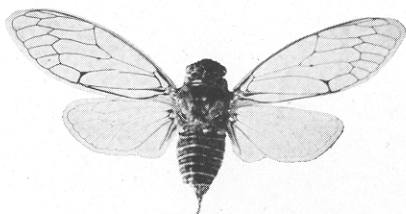


FIG. 1.

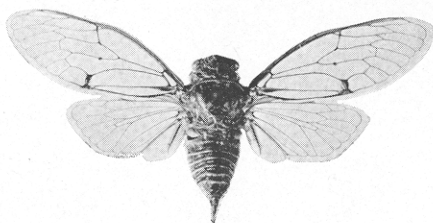


FIG. 2.

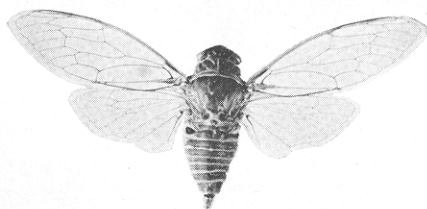


FIG. 3.

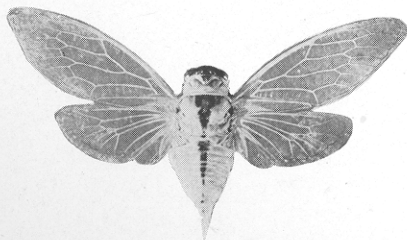


FIG. 4.

Cicadidæ.