

STUDIES OF THE GENUS *KUNZEANA*. I. FIVE NEW SPECIES OF MEXICAN *KUNZEANA*

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While working with the *Dikraneurini* complex of the Cicadellinae, Oman has separated out a genus which he has named *Kunzeana*. *D. kunzei* Gillette was designated as the type. Although closely related to *Dikraneura* it is distinguished from it by the venation of the wings. The outer apical cell is much shorter in *Kunzeana*, not extending basad of the adjoining apical cell. It differs from *Dikrella* in having an inner apical cell narrower basally than the combined width of the two adjoining apical cells.

The species of this genus occur in the southwestern portion of the United States and in Mexico. The Mexican fauna is especially abundant in species and most of the species are undescribed. The first group of undescribed species are treated below. The types of all these species are in the DeLong collection.

***Kunzeana popae* n. sp.**

Figure 5

Resembling *kunzei* (Gillette) in general form and appearance but larger, with a shorter head, and with distinctive coloration and genitalia. Length 3.25 mm.

The vertex of the male is produced about one-half of its length in front of the eyes. The anterior margin is bluntly angled at the apex and its median length is about two-thirds as great as its basal width between the eyes. The vertex of the female is slightly longer and more sharply angled than that of the male.

Color: The vertex is orange-yellow with a dull creamy band extending along the anterior margin between the eyes. The face is dusky tan with the lorae and genae creamy-yellow. The pronotum is olive-green with a broad, orange-yellow band along its anterior margin. This anterior band of the pronotum is produced onto the disk as blunt points near the middle of each side. The scutellum is dull orange with its basal angles orange. The elytra are translucent yellowish-green with semi-hyaline stripes along the clavus next to the claval suture, between the medial and cubital veins, and along the distal third of the costal margin.

Genitalia: The posterior margin of the seventh abdominal sternite of the female is almost truncate with its lateral margins rounded. The ovipositor projects but little beyond the pygofer. The plates, styles and pygofer of the male are similar to those of *kunzei*. The long, thin pygofer hooks arise at the base of the anal tube. They are directed ventrad at their bases, then bend sharply caudad near their proximal third and taper evenly to sharp points. The base of the aedeagus is short. The dorsal processes of the base are moderate in length and taper to sharp apices. The phallicata curves gently dorsad and is moderately thick and broad. It expands laterally near its apex and then narrows to a sharp apex. A pair of long, thin, sharply pointed lateral processes arise near the base of the phallicata and extend proximal to the phallicata to near its apical third. There, they diverge slightly laterally and terminate near the expanded portion of the phallicata. In caudal view, a second pair of lateral processes can be seen. These arise slightly below the first pair and extend proximal to the phallicata for almost their entire length, only their curved, pointed apices diverge from the phallicata.

Holotype male and allotype female collected at Mt. Popo, Mex., Sept. 28, 1941; male and female paratypes collected at Puebla, Pue., October 18, 1941, and at Orizaba, V. C., Oct. 17, 1941, (K 280), by DeLong, Good, Caldwell and Plummer; male and female paratypes collected at Mexico City, D. F., (W. 18kms.), Sept. 1, 1939, by D. M. DeLong; male paratype collected from corn at Santa Barbara, Mex., May 12, 1927, (M. B. 224), and from corn, May 28, 1927, (M. B. 226), by Dr. Dampf.

Kunzeana popae var. **jacintae**, n. var.

Similar to *popae* in general appearance and genitalia, but differing from it in being slightly larger, having the head more rounded at the apex, and having different coloration. Length 3.5 mm.

The vertex is similar to that of *popae* with the exception of the anterior margin which is definitely more rounded at the apex than that of *popae*. The male genitalia of *popae* and *jacintae* are alike while the posterior margin of the seventh abdominal sternite of the female of *jacintae* is more produced at the middle than that of *popae*.

Color: The vertex is orange-red with an ivory band along the anterior margin between the eyes. The face is dusky orange with the lateral portions of the genae cream. The pronotum is olive-green with an anterior band similar to that of *popae*, orange-red. The scutellum is dusky-orange with the apex and basal angles orange-red. The elytra are translucent, bright to orange-yellow. The hyaline stripes on the clavus and corium of the male are broader than those of *popae* while the female of *jacintae* has only the first and fourth apical cells semi-hyaline.

Holotype male from San Jacinta, D. F., May 24, 1932, (M. F. 2566); allotype female same locality June 30, 1932 (M. F. 2601); male paratypes from San Jacinta June 23, 1932 (M. F. 2589); May 16, 1932 (M. F. 2551); June 7, 1932 (M. F. 2579); Chapingo, D. F., May 19, 1924 (M. B. 54) all collected by Dr. Alfonse Dampf. The San Jacinta specimens were collected at a light trap. The Chapingo specimens were swept from *Shinus molle*.

Kunzeana acaciae n. sp.

Figure 4

Resembling *popae* in general form and appearance but with distinctive coloration and genitalia. Length 3.5 mm.

The vertex is produced for about one-half of its length in front of the eyes, the anterior margin is bluntly angled at its apex, and its median length is about two-thirds as great as its basal width between the eyes.

Color: The vertex is golden-brown in the male, orange-brown in the female, with an ivory band along the anterior margin between the eyes. The face is dusky tan with the genae and lorae cream. The pronotum is olive with an orange-red band along its anterior margin. This orange-red band projects as sharp points onto the disk near the middle of each side of the pronotum. The scutellum is nearly uniformly orange. The elytra are translucent green to golden-yellow.

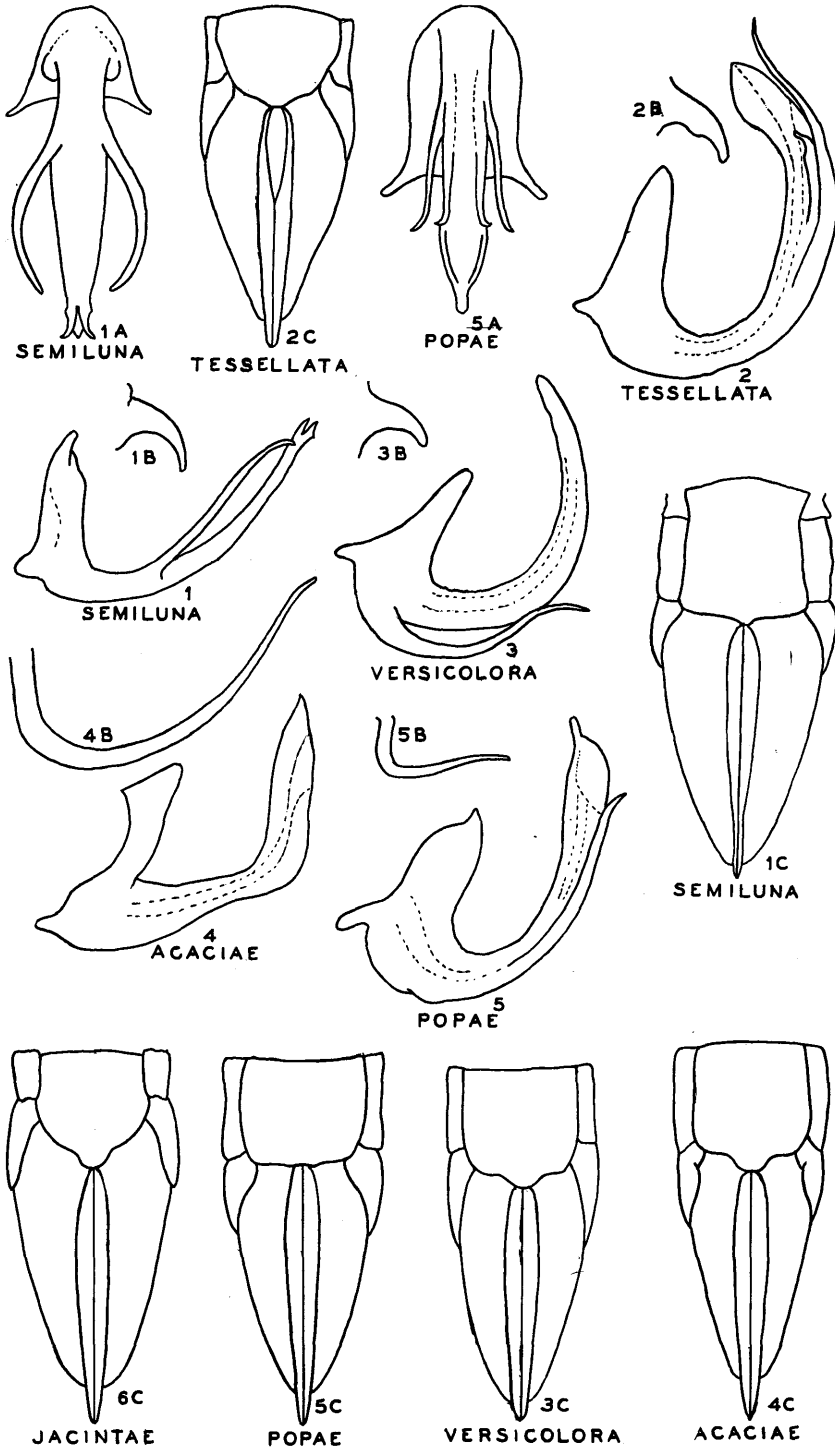
Genitalia: The lateral margins of the seventh abdominal sternite of the female are nearly straight and slope inwardly to a truncate median portion, the middle half of which is again produced into a blunt lobe. The ovipositor is but little produced beyond the pygofer. The plates, styles, and pygofer of the male are similar to those of *popae*. The thin pygofer hooks arise near the base of the anal tube and curve dorso-caudally. They are sharply pointed and subequal in length to the aedeagus. The base of the aedeagus is short and narrow with the dorsal processes of the base moderately long, thin, and erect. The phallicata is bent at nearly right angles near its center with the proximal portion directed caudo-dorsally and the distal portion directed dorsally. In lateral view, the proximal portion tapers evenly inwardly to the bend. There the ventral margin is expanded and then tapers evenly again to its pointed apex.

Holotype male, allotype female and male and female paratypes collected from a white flowered, creeping acacia at Las Casas, Chiapas, July 2, 1926, (M. F. 1015) by Dr. Dampf; male paratype collected at Tetela del Rio, G'ro., Aug. 13, 1930, (M. F. 1757) by J. Parra; male and female paratypes collected at Rio Frio, D. F., Oct. 7, 1941, (K 55) by DeLong, Good, Caldwell and Plummer; male paratype collected at Valles, S. L. P., Mex., Dec. 1, 1938, by J. S. Caldwell.

EXPLANATION OF PLATE

- 1, 2, 3, 4, 5. Aedeagus (lateral view).
 1A, 5A. Aedeagus (ventral view).
 1B, 2B, 3B, 4B, 5B. Pygofer hook (lateral view).
 1C, 2C, 3C, 4C, 5C, 6C. Female seventh sternite and pygofers.

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***Kunzeana tessellata* n. sp.**

Figure 2

Resembling *popae* in general form and appearance but with the anterior margin of the vertex more rounded at the apex and with distinctive coloration and genitalia. Length 3.25 mm.

The vertex is produced about one-half of its length in front of the eyes, with its anterior margin rounded, and with its median length about two-thirds as great as its basal width between the eyes.

Color: The vertex is light cream to dull tan heavily spotted with flecks of red which merge in places to form chains. A large, round, orange spot is located on each side of the vertex near the apex and a large cream spot is located near the middle of each side of the anterior margin. The dorsal portion of the face is dark cream flecked with red while the lower portion is dull tan with the lorae and genae cream. The disk of the pronotum is light greyish-green with its anterior margin broadly bordered by a dull, creamy band which is heavily flecked with red. The scutellum is dull orange with the basal angles and apex yellowish-orange. The elytra of the male are dull yellowish-orange while those of the female are dull greyish-red.

Genitalia: The posterior margin of the seventh abdominal sternite of the female is decidedly produced, its lateral margins are straight and slope inwardly to a median portion which is angled at its apex. The ovipositor exceeds the pygofers but little in length. The plates, styles, and pygofers of the male are similar to those of *popae*. The bluntly pointed pygofer hooks arise on the dorso-caudal angle of the pygofers, extend caudally, and have a slight point near the middle of their ventral margins. The base of the aedeagus is moderately short and narrow with the dorsal processes of the base long, thin, and erect. The phallicata extends gently dorsad and is nearly parallel-sided to its bluntly pointed apex. A pair of thin, sharply pointed ventro-lateral processes arise near the middle of the phallicata and extend parallel to the phallicata to a distance slightly above its apex. These processes are closely appressed to one another for their entire length. A second pair of processes arise on the sides of the phallicata near its middle, diverge slightly from the phallicata, and extend to near its apex. These processes are thin, their apices are sharply pointed, and their apical portions are recurved.

Holotype male, allotype female, male and female paratypes collected at Puebla, Pue., Oct. 18, 1941, by DeLong, Good, Caldwell and Plummer.

***Kunzeana versicolora* n. sp.**

Figure 3

Resembling *tessellata* in general form and appearance but with distinctive coloration and genitalia. Length 3.25 mm.

The vertex is produced about one-half of its length in front of the eyes, the anterior margin is bluntly angled at the apex, and its median length is about two-thirds as great as its basal width between the eyes.

Color: The vertex is a light greyish-white flecked with spots of red which join in places to form irregular lines. A large, orange spot is located on each side near the apex of the vertex and a large white spot is located on the anterior margin near the middle of each side. The face is light tan with the genae and lorae cream. The center of the disk and the posterior margin of the pronotum are golden orange. The remainder of the pronotum is greyish white flecked and irregularly-lined with red. A few large, orange spots are located along the anterior margin of the pronotum. The scutellum is dusky orange with the basal angles and the apex a lighter orange. The elytra vary in color from translucent, sordid green to smoky, tinted with red. This variation in color is independent of sex and locality.

Genitalia: The posterior margin of the seventh abdominal sternite of the female is but little produced, its lateral margins are nearly straight, and its median portion is keeled. The ovipositor exceeds but little the pygofers. The plates styles, and pygofers of the male are similar to those of *tessellata*. The thin pygofer hooks arise on the dorso-caudal angle of the pygofer, are sharply pointed, and curve gently ventrally. The base of the aedeagus is moderately long and narrow with the dorsal processes of the base sharply pointed and moderately long and thin. A pair of thin, recurved, sharply pointed, closely appressed ventro-lateral processes arise on the base and

extend caudally to near the middle of the phallicata. The thin phallicata curves gently dorsally and tapers evenly to a sharply pointed apex.

Holotype male, allotype female, male and female paratypes collected at Mexico City, D. F., (W. 18 kms.), Sept. 1, 1939, by D. M. DeLong; male and female paratypes collected at Mexico City, D. F., Toluca Rd., Sept. 26, 1945, by DeLong, Hershberger and Elliott.

***Kunzeana semiluna* n. sp.**

Figure 1

Resembling *popae* in general form and appearance but with distinctive genitalia. Length 3.25 mm.

The vertex is produced for about one-half of its length in front of the eyes, it is bluntly angled at its apex, and its median length is one-half as long as its basal width between the eyes.

Color: The vertex is golden brown with its anterior margin bordered by a thin, cream band. The face is golden brown with the genae and lorae greyish-ivory. The pronotum is pale olive with its anterior margin bordered by a golden brown band which is produced onto the disk as a sharp point near the middle of each side. The scutellum is dull orange with the basal angles a lighter orange. The elytra are translucent bright yellow with a broad stripe along the claval suture, the apical third of the costal margin, and the apical cells, semi-hyaline.

Genitalia: The posterior margin of the seventh abdominal sternite of the female is nearly truncate with its lateral angles sharp and with its median quarter produced into a sharply pointed lobe. The plates, pygofers, and styles of the male are similar to those of *popae*. The pygofer hooks arise near the base of the anal tube, are directed caudo-ventrally, and taper from a heavy base to a sharply pointed apex. The base of the aedeagus is moderately long and slender with its dorsal processes rather short. The phallicata is long, thin, and broad, and is curved slightly dorsad. A pair of long, thin lateral processes arise on the proximal third of the phallicata and then curve back toward it. These processes terminate near the apex of the phallicata. A pair of very short, flat, recurved ventral processes arise on the phallicata near its apex and terminate at the apex of the phallicata.

Holotype male, allotype female, and female paratype collected at La Guardia, D. F., (Km 40), October 26, 1941 by DeLong, Good, Caldwell, and Plummer.
