

## FIVE NEW GENERA OF DELPHACINE FULGORIDS (Homoptera-Fulgoridae-Delphacinae)

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### *Parkana* new genus

Resembling *Dicranitropis* in general appearance but median carina of clypeus dividing on apex of crown. Crown slightly longer than greatest basal width; clypeus widest at middle and beyond; lateral carinae of pronotum straight, not reaching hind margin. Male genital capsule in lateral view greatly excavated on caudo-ventral margin; in caudal view with a pair of asymmetrical processes projecting caudally from base of diaphragm.

Type of the genus *Parkana alata* n. sp.

### *Parkana alata* n. sp.

#### Brachypterous form:

**Structure:** First segment of antennae about twice as long as wide; clypeus about twice as long as wide, narrowed toward each end, apex narrowest, distinctly tricarinate, carinae broad; elytra longer than broad, semihyaline, veins raised, apices roundly truncate, extending to about third abdominal segment.

**Color:** In male general color stramineous; area between carinae of clypeus, much of other portions of venter, lateral corners of pronotum, dorsum of abdomen except median portion of first two and last two segments almost black. In female much lighter but some specimens much darker, more or less as in the male.

**Genitalia:** In lateral view: pygofer sinuately excavated on caudo-ventral margin, antero-ventral corner projected anteriorly; anal segment without marginal processes; aedeagus widest at base, curving ventrally, narrowed to a blunt apex with a flat short process on left side near base with four sharp processes on its apex; styles usually not visible. In caudal view: base of diaphragm opening with a pair of asymmetrical processes, the left one curved and about twice as long as right; styles long and spatulate with inner apical margin folded or rolled over on itself.

**Types:** Holotype ♂, allotype ♀, 131 ♂ and 83 ♀ paratypes, Flagstaff, Ariz., July 14, 1947, R. H. Beamer; other paratypes: 41 ♂♂ and 44 ♀♀, Park City, Utah, Aug. 1, 1947, R. H. Beamer; 1 ♂, Oak Creek Canyon, Ariz., July 15, 1947, L. D. Beamer; 1 ♂ Hamilton, Mont., July 19, 1949, R. H. Beamer.

#### Macropterous form:

Like the brachypterous form except with flight wings; elytra widest near cross-veins, extending almost half their length beyond abdomen.

**Types:** Holomorphotype ♀ and 23 ♀ paramorphotypes, Flagstaff, Ariz., July 14, 1947, R. H. Beamer.

Types in Snow Entomological Collections.

### *Penepissonotus* new genus

Resembling *Pissonotus* but without the dark band across front coxae and clypellus and male styles without their apices flattened and rolled into overhanging ledges. No median processes ventrad to styles.

Crown raised considerably above level of eyes, much longer than basal width, long and narrow. Easily mistaken for *Pissonotus* but genitalia not the *Pissonotus* type. Genotype *Penepissonotus bicolor* n. sp.

### *Penepissonotus bicolor* n. sp.

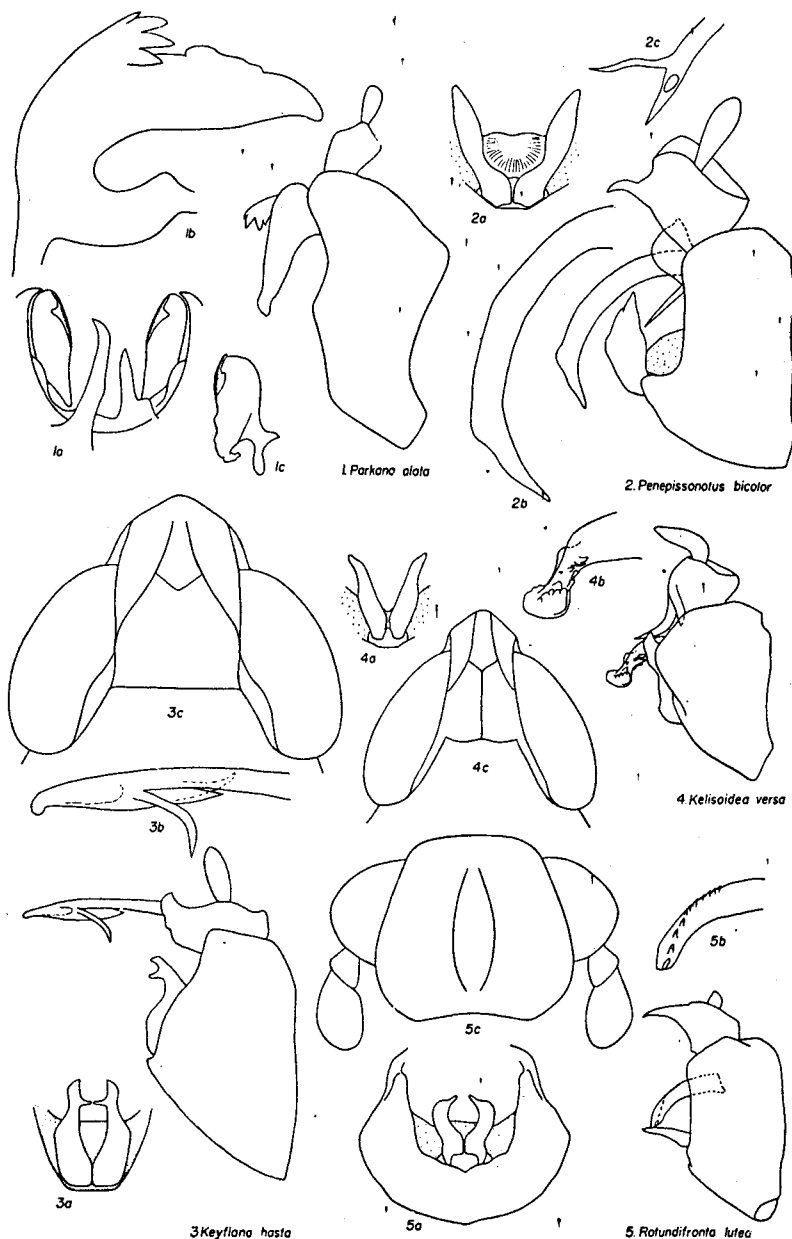
#### Brachypterous form:

Resembling a species of *Pissonotus* but most of body light-colored instead of dark. Length ♂ 2.5 mm.; ♀ 3.0 mm.

**Structure:** Clypeus slightly more than twice as long as wide, widest just before apex in ♂, at apex in ♀, slightly narrowed toward base, more so on basal fourth, definitely tricarinate; crown not quite twice as long as basal width; almost without carinae on anterior half, definitely carinate on basal third; elytra about as wide as long, hyaline, veins raised, apices truncate, corners rounded.

**Color:** Head and pronotum and ♂ styles dark brown, remainder of body stramineous; outer segment of antennae lighter than basal.

**Genitalia:** In lateral view: pygofer deeply excavated on dorsal two-thirds of posterior margin; anal segment quadrate with a pair of stout slightly in-curved processes on outer ventral corner; aedeagus almost as long as width of pygofer, widest at base, slightly curved ventrally, dorsal margin narrowed on outer fourth to sharp apex; styles widest near middle, narrowed to sharp apices; aedeagal brace large, rounded, a long parallel-sided spine, twice as long as basal width of aedeagus just ventrad to base of aedeagus. In caudal view: styles widest at base, diverging, inner margin excavated, apices pointed; aedeagal brace not extended dorsally, broadly rounded



caudally; apex of aedeagus with a spur on left side where shaft begins to narrow, about as long as to apex of shaft.

**Types:** Holotype ♂, allotype ♀, 13 ♂ and 11 ♀ paratypes, Woolwine, Va., Sept. 1, 1946, R. H. Beamer; other paratypes: 1 ♀, Chapel Hill, N. C., Aug. 31, 1946, R. H. Beamer; ♀ same place and time, L. D. Beamer; 1 ♂, Parish, Fla., July 9, 1948, R. H. Beamer; 2 ♂ ♂, Sanford, Fla., Sept. 6, 1926, E. D. Ball; 1 ♂, 4 mi. s. Annapolis, Md., Sept. 30, 1934, P. W. Oman.

Types and paratypes in Snow Entomological Collections, paratypes in U. S. National Museum.

#### Macropterous form:

Like the brachypterous form but with flight wings. Elytra reaching one-third their length beyond body, hyaline, veins darker. Anterior half of mesonotum dark instead of light as in brachypterous form.

**Types:** Holomorphotype ♀, Sparrowpoint, Md., July 5, 1933, F. C. Bishop; paramorphotypes, 2 ♀ ♀, Snow Hill, Md., June 24-27, 1933, F. C. Bishop; 1 ♀, St. John's Coll., Annapolis, Md., June 25, 1933, F. C. Bishop; 1 ♀ Savannah, Ga., Sept. 19, 1933.

Type and paramorphotypes in U. S. National Museum, paramorphotype in Snow Entomological Collections.

#### Keyflana new genus

Runs to *Neomalax* in Muir and Giffard's key (Studies in North American Delphacidae) but does not have a long and narrow crown. Head considerably narrower than greatest body width; apex of abdomen quite narrowed from sides and venter. Second segment of antennae about one-third longer than first; clypeus widest on apical third, tricarinate; crown almost flat, about one-third longer than basal width, sides slightly constricted near base, apex rather pointed, extending more than one-fourth its length in front of eyes. Pronotum with three carinae, lateral almost straight, not reaching hind margin. Type of the genus *Keyflana hasta* n. sp.

#### Keyflana hasta n. sp.

##### Brachypterous form:

**Structure:** Clypeus about twice as long as wide, widest on apical third, narrowed to apex and much more so to base, definitely tricarinate, median

#### EXPLANATION OF PLATE:

1. *Parkana alata*, lateral view of genital capsule showing anal segment and right side of aedeagus; 1a, caudal view of diaphragm with asymmetrical processes and styles; 1b, left side of aedeagus enlarged; 1c, right style removed from diaphragm.
2. *Penepissonotus bicolor*, lateral view of genital capsule showing anal segment, aedeagus, long slender spine at base of aedeagus, aedeagal brace and style; 2a, caudal view of styles and aedeagal brace; 2b, aedeagus enlarged; 2c, dorso-ventral view of tip of aedeagus.
3. *Keyflana hasta*, lateral view of genital capsule showing anal segment with wide processes, aedeagus and style; 3a, caudal view of styles and aedeagal brace; 3b, tip of aedeagus enlarged; 3c, dorsal view of head.
4. *Kelisoidea versa*, lateral view of genital capsule showing anal segment with asymmetrical processes, aedeagus and style; 4a, caudal view of styles and aedeagal brace; 4b, aedeagus enlarged; 4c, dorsal view of head.
5. *Rotundifronta lutea*, lateral view of genital capsule showing anal segment with processes, aedeagus and style; 5a, caudal view of styles and aedeagal brace; 5b, aedeagus enlarged; 5c, ventral view of head.

carina very broad. Elytra barely longer than wide, semihyaline, veins raised, apices truncate; abdomen with dorsal median carina and a semblance of lateral rows of pustules. Length ♂ 3.5 mm., ♀ 4.5 mm.

**Color:** General color stramineous, some specimens light brown, abdomen often with darker areas.

**Genitalia:** In lateral view: pygofer rather trapezoidal, with posterior margin sinuate and dorsal margin about half as long as ventral; anal segment very broad and short with posterior upper corner produced in a pair of broad flaps; aedeagus very long and slender, curving ventrad with three long, retrorse processes on ventral margin near apex; styles widest at base, narrowing rapidly on caudal margin near middle to bifid apices. In caudal view: styles widest on basal half, outer margin rapidly narrowing near middle to half basal width to end in rounded apices with narrow finger-like process on inner margin before apex; aedeagal process broadly excavated, not produced dorsally.

**Types:** Holotype ♂, allotype ♀, 31 ♂ and 30 ♀ paratypes, Cedar Keys, Fla., March 3, 1947, R. H. Beamer; other paratypes: 4 ♂ and 1 ♀, same time and place, L. D. Beamer; 1 ♂, same place, July 12, 1939, R. H. Beamer; 2 ♂ and 4 ♀, same place, Aug. 10, 1939, R. H. Beamer; 28 ♂ and 15 ♀, Yankeetown, Fla., March 3, 1947, R. H. Beamer; 2 ♂ and 2 ♀, same time and place, L. D. Beamer.

Types in Snow Entomological Collections.

#### **Kelisoidea** new genus

Very close to *Kelisia* but may be distinguished by having a more pointed crown, a front which is widest near apical third, the first segment of the antennae longer than wide and the male genital capsule greatly expanded in caudal view.

Type of the genus *Kelisoidea versa* n. sp.

#### **Kelisoidea versa** n. sp.

##### **Brachypterous form:**

This is a unique species externally resembling several species of *Kelisia* quite closely but easily distinguished by the above generic characters. Length ♂ 2.2 mm.; ♀ 2.7 mm.

**Structure:** Clypeus almost three times as long as greatest width which is slightly before apical third, narrowed toward each end more so toward base, definitely tricarinate; crown more than twice as long as basal width, definitely carinate, apex sharply angled; pronotum and mesonotum tricarinate, lateral carinae of pronotum straight reaching hind margin; elytra reaching about one-third their length beyond abdomen, widest near basal fourth, tapered to sharp apices, veins raised with numerous raised puncts, semihyaline either side of fumous median line.

**Color:** General color stramineous, area between lateral carinae of clypeus, lateral fovea of crown, sides of pronotum and mesonotum, dorsum of abdomen except median line and median longitudinal stripe on wings more or less brown.

**Genitalia:** In lateral view: pygofer roundly triangular, widest on dorsal side; anal segment large with a pair of ventro-caudally curving processes

arising near middle of caudal margin, right one about half as long as left; aedeagus widest at base; strongly narrowed on outer half to knobbed apex, outer third more or less covered with short retrorse teeth; styles widest at base, outer margin sinuate, apices with a sharp tooth. In caudal view: styles widest at base, margins sinuate, narrowed to sharp apices; aedeagal braces broadly and angularly excavated ventrally.

**Types:** Holotype ♂, allotype ♀, 12 ♂ and 13 ♀ paratypes, Ramrod Key, Fla., March 15, 1947, R. H. Beamer; other paratypes: 1 ♂ and 4 ♀, Homestead, Fla., March 14, 1947, R. H. Beamer; 1 ♂, Big Pine Key, Fla., March 15, 1947, R. H. Beamer; 2 ♂ and 1 ♀, Royal Palm St. Park, Fla., March 16, 1947, R. H. Beamer.

Types in Snow Entomological Collections.

#### **Rotundifronta** new genus

Related to *Crimorphus*, *Metropis*, *Jassidacus* and *Macrotomella* but easily separated from these by the front being as wide as long and almost circular in shape. Two median longitudinal carinae of front widely separated and faint; crown as wide as long, rounded on apex. Pronotum faintly tricarinate, carinae straight and not reaching hind margin.

Genotype *Rotundifronta lutea* n. sp.

#### **Rotundifronta lutea** n. sp.

##### **Brachypterous form:**

This is a small, luteus-colored delphacid collected from salt grass on the northern tip of the Florida Keys. Length ♂ 2 mm.; ♀ 2.6 mm.

**Structure:** Clypeus protruding in front of clypellus, widest on apical third, broadly and roundly excavated on apex; elytra almost rectangular, semihyaline, veins raised, apices truncate, outer corners rounded, median longitudinal carina on dorsum of abdomen.

**Color:** General color more or less luteus, some specimens darker or lighter.

**Genitalia:** In lateral view: pygofer of male almost rectangular, narrowed on caudal border; anal segment with a pair of strong, slightly curving processes from upper caudal corner; aedeagus widest at base, gradually curving ventrally, sides almost parallel to rounded apex, outer third of right side with four retrorse teeth, line angling to middle third of dorsal margin with 6-7 retrorse teeth. In caudal view: styles aviccephaliform, beaks turned in; aedeagal brace very slightly raised dorsally over broad median, flat portion.

**Types:** Holotype ♂, allotype ♀, 112 ♂ and 69 ♀ paratypes, 17 mi. s., Homestead, Fla., March 14, 1947, R. H. Beamer; 3 ♂ and 2 ♀ paratypes, Homestead, Fla., March 14, 1947, L. D. Beamer.

##### **Macropterous form:**

Like the brachypterous form except with flight wings extending one-third their length beyond abdomen and color much darker often quite brown.

**Types:** Holomorphotype ♀, same place, time and collector; 2 ♀ paromorphotypes, Homestead, Fla., March 3, 1947, L. D. Beamer.

Types in Snow Entomological Collections.