

A REVIEW OF THE GENUS *KELISIA* IN AMERICA NORTH OF MEXICO WITH FOUR NEW SPECIES (Homoptera-Fulgoridae-Delphacinae)

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Key to the Species

1. Elytra with a brown or black, longitudinal stripe of regular width
from base to tip2
Elytra without such a stripe7
2. Dark mark of elytra continued across front*flagellata*
Dark mark of elytra not continued across front3
3. Black spot on front beneath each ocellus and one on lateral margin of pronotum above coxae*pectinata*
Usually without black spot in either of these positions4
4. Stripe on elytra very broad, occupying two-thirds area*spinosa*
Stripe narrow, occupying about one-third area5
5. Stripe on elytra very light amber except at tip*torquata* n. sp.
Stripe very much darker6
6. Elytra of short wing form barely passing abdomen, median stripe light*parvicurvata* n. sp.
Elytra with almost one-third their length beyond abdomen, median stripe dark*curvata*
7. Elytra without black marks*flava* n. sp.
Elytra with black marks8
8. Black spot beneath each ocellus and on lateral margin of pronotum above front coxae*bimaculata*
Without such black spots9
9. Black markings of elytra confined to a spot in apex of elytra10
Black markings of elytra heavy at apex and base, usually narrowly following second sector*axialis*
10. Dark stripe on either side of abdomen continued over pronotum.....*retrorsa*
Dark stripe on either side of abdomen usually not continued over pronotum11
11. Genital capsule of male almost black*vesiculata* n. sp.
Genital capsule of male stramineous*hyalina*

Kelisia axialis VanD.

This interesting species was described from one pair taken at Lancaster, New York in 1886. This range is extended to include the following localities by specimens in the Snow Entomological Collections: Brule, Wis.; Spring-

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field, Vt.; Danbury, N. H.; Durham, N. H.; Stroudsburg, Pa.; Pecks Pond, Pa.; Bergen, N. Y.; and Mountain Lake, Va. All of these specimens were macropterous and were taken in August and September.

Kelisia bimaculata Beamer

A nice series of both sexes of this species was taken at New Canaan, N. H., in August. All specimens are brachypterous as are the types.

Kelisia curvata Beamer

The range of this beautiful little dark-lined species is here extended as follows; Dallas, Texas, Dec. 5, 1945; Old Ocean, Texas, Jan. 3, 1946; Chapel Hill, N. C., Aug. 31, 1946; Gainesville, Fla., Dec. 25, 1950.

Kelisia pectinata Beamer

Additional specimens of this species have been taken in Tinley Park and Paxton, Ill., July, 1946.

Kelisia retrorsa Beamer

The range of this species has been increased by material from the following localities: Canaan, N. H.; Colchester, Conn.; Storrs, Conn.; and Dingmans Ferry, Pa. All were taken in August, 1946.

Kelisia spinosa Beamer

Additional material of this species has been added from the following localities: Pactola, S. D.; and Dingmans Ferry, Pa.

1. *Kelisia torquata* n. sp.

Brachypterous form:

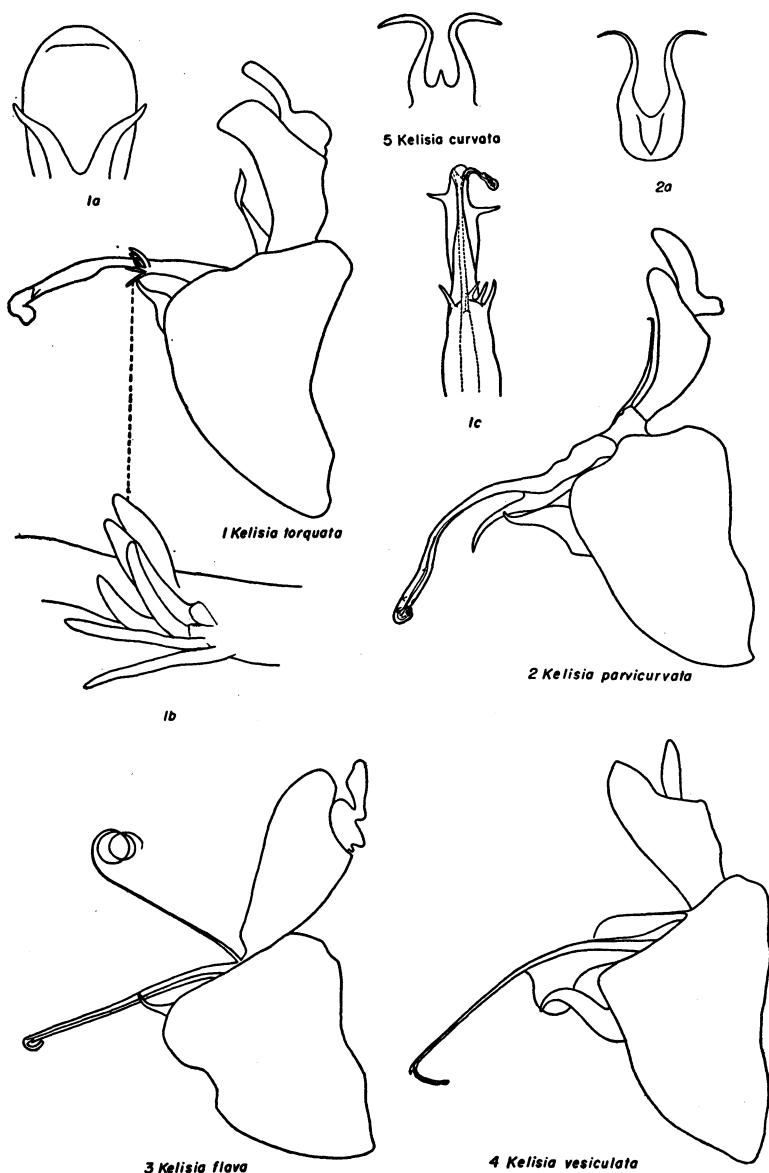
Resembling *Kelisia curvata* Beamer but longitudinal dark stripe on elytra very light, process near middle of aedeagus with many divisions instead of a single process and lyre-shaped anal segment processes without a median basal tooth in caudal view. Length ♂ 3 mm., ♀ 3.2 mm.

Structure: Elytra widest just before base, tapering to pointed apices, more so on mesal margins, extending about one-seventh their length beyond tip of abdomen. Hind wings reduced to tiny pads.

Color: General color stramineous with a very light amber colored stripe from hind margin of eye to tip of elytra where it is usually darker, stripe usually not covering more than one-third area of elytra; body usually without definite dark markings.

Genitalia: Pygofer of male in lateral view more or less triangular, posterior angle broadly rounded, basal angles somewhat sharper; anal segment with posterior margins truncate, less than half as long as inner margin with a basal pair of processes widest at base, lyre-shaped in caudal view without a median tooth; aedeagus long and broader than normal for the genus with a basal ventral process which ends just before middle of shaft in a number of finger-like processes, the number variable; apex of shaft more or less twisted with a sharp tooth on either side before tip not bilaterally symmetrical.

Holotype ♂, 5 ♂ and 16 ♀ paratypes, Storrs, Conn., August, 1946, R. H. Beamer.



EXPLANATION OF PLATE

1. *Kelisia torquata* lateral view of genital capsule; 1a caudal view of processes on anal segment; 1b enlargement of processes near middle of aedeagus; 1c dorsoventral view of aedeagus enlarged.
2. *Kelisia parvicurvata* lateral view of genital capsule; 2a caudal view of processes on anal segment.
3. *Kelisia flava* lateral view of genital capsule.
4. *Kelisia vesiculata* lateral view of genital capsule.
5. *Kelisia curvata* caudal view of processes on anal segment.

Macropterous form:

Like the brachypterous form but brown line on sides of thorax darker, with flight wings about one-third longer than abdomen. Length ♂ 4.5 mm.

Holomorphotype ♂ and 1 ♂ paramorphotype Storrs, Conn., August, 1946, R. H. Beamer.

Types in Snow Entomological Collections.

2. *Kelisia parvicurvata* n. sp.

Brachypterous form:

Resembles *Kelisia curvata* Beamer but definitely smaller, median longitudinal stripe on elytra much less dense, median process on venter of aedeagus longer and without a sharp demarcation between the apical and basal portion. Length ♂ 2.2 mm., ♀ 2.5 mm.

Structure: Elytra widest at tip of scutellum, tapering to evenly sharpened apices, barely reaching beyond tip of abdomen; hind wings reduced to tiny pads about half as large as an eye.

Color: General color stramineous to almost white; light brown stripe from back of eye to tip of elytra where it is darker, stripe occupies slightly less than one-third area of elytra; body with some slightly dusky areas along lateral margins.

Genitalia: Male pygofer in lateral view more or less triangular with caudal angle broadly rounded and toward dorsal margin; posterior margin of anal segment broadly rounded and less than one-fourth as long as anterior or dorsal margin; lyre-shaped processes in caudal view narrow, not half as long as aedeagus, with tips turned out, without median tooth in caudal view; aedeagus long and slender with an elongated process on ventral side of basal third which is not deeply incised on its ventral side near middle.

Holotype ♂, allotype ♀, 1 ♂ and 6 ♀ paratypes, Palatka, Fla., March 10, 1947, R. H. Beamer.

Types in the Snow Entomological Collections.

3. *Kelisia flava* n. sp.

Brachypterous form:

Resembles *Kelisia flagellata* Beamer in internal male genitalia but has no dark color at all on the elytra and the elytra are longer and more pointed without branches in apices. Length ♂ 2.9 mm., ♀ 3.2 mm.

Structure: Elytra widest near basal third, extending beyond abdomen less than one-fourth their length; hind wings tiny pads less than half size of an eye. External parts of genital capsule quite thickly covered with rather long white hairs, much more so than in *K. flagellata*.

Color: General color light stramineous without fumose color anywhere.

Genitalia: Male pygofer in lateral view more or less triangular, caudal angle broadly rounded; anal segment with a pair of long whip-like basal processes; aedeagus long, rather broad with a pair of lateral teeth just before apex.

Holotype ♂, allotype ♀, 97 ♂ and 57 ♀ paratypes, Danbury, N. H., August 8, 1946, R. H. Beamer; other specimens at hand: 1 pair Durham, N. H.; 1 pair Colchester, Conn.; 87 ♂ s and 2 ♀ s Lake Placid, N. Y.; 32 ♂ s and

4 ♀s Paul Smith, N. Y.; 2 ♂s and 4 ♀s Numidia, Pa., 12 ♂s and 12 ♀s Ashland, Pa., 8 ♂s and 10 ♀s Chapel Hill, N. C., all in August, 1946, R. H. Beamer.

Macropterous form:

Resembling the brachypterous form but larger and with flight wings extending almost one-third their length beyond the abdomen. Length ♀ 4 mm.

Holomorphotype ♀ and 4 ♀ paramorphotypes, Lake Placid, N. Y., July 30, 1946, R. H. Beamer.

Types in the Snow Entomological Collections.

4. *Kelisia vesiculata* n. sp.

Brachypterous form:

Resembling *Kelisia hyalina* Beamer but genital capsule almost black in color, aedeagus straight in lateral view with median ventral process enlarged and flattened laterally on outer half instead of hooked. Length ♂ 3.2 mm., ♀ 3.4 mm.

Structure: Elytra widest on basal third, slightly narrowed to rounded apices, extending about one-fifth their length beyond abdomen; hind wings reduced to mere pads less than half as large as an eye. Male pygofer quite hairy.

Color: General color dark stramineous with narrow white median longitudinal stripe on pronotum, elytra almost hyaline with a small black more or less angular black spot on apices. Male pygofer almost black, various darkened areas over abdomen.

Genitalia: Pygofer of male in lateral view more or less triangular, ventral corner broadest, caudal angle about a right angle; processes at base of anal segment about half as long as aedeagal shaft, almost straight, quite narrow; aedeagus straight, widest at base, narrowed to twisted apex, median ventral process about half as long as shaft, enlarged to a large lobe apically, laterally flattened.

Holotype ♂, allotype ♀, 44 ♂ and 26 ♀ paratypes, Storrs, Conn., August, 1946, R. H. Beamer.

Macropterous form:

Like the brachypterous form except body generally darker, flight wings present, extending about one-third their length beyond the body with usually a dark spot between the branches of the second sector.

Holomorphotype ♂, allomorphotype ♀, 46 ♂ and 20 ♀ paramorphotypes, Storrs, Conn., August, 1946, R. H. Beamer.

Types in the Snow Entomological Collections.