***Heriades*** of the tallgrass prairie region and greater Midwest

M. Arduser – *edits: January 27, 2024*

**Females:**

1. Outer surface of mandible with superior carina and inferior carina joined near the base of the mandible, otherwise carinae parallel…………………………………………………………………………………………..2

Outer surface of mandible with superior carina and inferior carina parallel throughout their length, not joined near base of mandible……………………………………………………………………………………………..3

2(1). Clypeus with a denticle at each apico-lateral margin, clypeal margin between the denticles entire; labrum with a single small tubercle at base (medially); common throughout TGP and midwest ……………………….…………………………………..…………………………………………………………………***carinata*** Cresson

Clypeal margin without denticles, medially with a broad concavity or emargination, not straight; labrum basally with two small tubercles either side of midline; western species of rare occurrence in the central Great Plains…………….……………………………………………………………………………………….……***cressoni*** Michener

3(1). Clypeal margin with median third weakly concave or emarginate, this concavity bordered by two small denticles; mandible short, about one half the length of the eye; head noticeably smaller than thorax; inner surface of foretibia normal, without an oval hollow filled with short dense hairs; common species throughout TGP and midwest…………………….……….…***leavitti***  Crawford and ***variolosa*** (Cresson)

**[Note:** females of these two sympateric species are difficult to separate in many instances. Traditionally separated by the punctures on T2 and T3 (of equal size in *leavitti*, noticeably smaller on T2 in *variolosa*), a large number of specimens are intermediate in those characters, and efforts to find additional morphological characters that separate the females haven’t met with much success. Males however are easily separated; see male key below.]

Clypeal margin with a small medial projection which may be simple or weakly emarginate, clypeal denticles lacking; mandible long, nearly as long as eye; head relatively massive, nearly as large as thorax; inner surface of foretibia with an oval hollow filled with short dense hairs; introduced species (on East Coast) not yet recorded from the midwest or TGP region………………………….………..***truncorum*** (Linn.)

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**Males:**

1. S1 truncate apically, and basally tuberculate; hind femur often spiculate on outer surface……………2

S1 pointed or rounded apically, convex in lateral view but not basally tuberculate; hind femur smooth on outer surface, without spicules………………………………………………………………………….………………………..3

2(1). S6 with two rows of 5-8 short, stout, dark, thickened spines; S2 hairs present, white, sub-erect but not concealing integument; hind femur spiculate on outer surface…………………………***carinata*** Cresson

S6 without stout dark thickened spines, with only some thin pale hairs; S2 covered with long white, dense, sub-erect hairs that largely conceal the integument; introduced species (on East Coast) not yet recorded from the midwest or TGP……………….……………………..……………………………..***truncorum*** (Linn.)

3(1). S1 apically sharply pointed, angle 90 degrees or less; S6 apically with a single patch of pale curved hairs………………………………………………………………………….……………………………..***variolosa*** (Cresson)

S1 apically rounded, blunt or truncate; S6 apically with two separate patches of pale curved hairs………4

4(3). S1 apically rounded or blunt, evenly convex in profile, without a tubercle; labrum basally with a weak elevation across entire basal area, without any tubercles……………………………….***leavitti*** Crawford

S1 apically truncate, with a pronounced tubercle in profile; labrum basally with a median tubercle flanked by two smaller tubercles; western species of rare occurrence in the central Great Plains ………………………………………………………………………………………………………………….....***cressoni*** Michener