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**The Aquatic and Semiaquatic Hemiptera (Belostomatidae  
and Saldidae) of Oklahoma**

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**BELOSTOMATIDAE**

Important papers including Oklahoma Belostomatidae are: Cummings (1933), DeCarlo (1938) and Lauck and Menke (1961). The latter work concerns the higher classification of the family and synonymizes the genus *Benacus* Stal with *Lethocerus* Mayr.

Characteristics: Relatively large size; oval in shape and dorso-ventrally compressed; ocelli absent; beak three-segmented; antennae four-

jointed, more or less pectinate, concealed beneath eyes; scutellum large, flat, triangular, fore legs prehensile; fore tarsi two-jointed with one well-developed claw, second claw rudimentary; abdomen with ventrolaterotergites clothed with varied amounts of hydrofuge hairs; abdominal venter keeled.

#### KEY TO THE SPECIES

1. Basal joint of beak longer than second; length 40 mm or less ..... 2  
    Basal joint of beak shorter than second; length greater than 40 mm... 3
2. Length of head, side view, 35-39 mm ..... *Belostoma lutarium*  
    Length of head, side view, 20-30 mm ..... *Belostoma flumineum*
3. Anterior femora grooved for reception of tibiae ..... 4  
    Anterior femora not grooved for tibial reception..... *Lethocerus griseus*
4. Interocular space subequal to width of an eye ..... *Lethocerus americanus*  
    Interocular space narrower than width of an eye ..... *Lethocerus uhleri*

#### *Belostoma* Latreille

Characteristics: Body elliptically shaped; hemelytral membrane well developed, wider than clavus, most of cells of equal length, abdominal sternites not subdivided by a suture; spiracles located near center of ventral laterotergites.

#### *Belostoma lutarium* (Stal)

Characteristics: Length 20-27 mm, width 11-18 mm.

Distribution: Jefferson, Love, Mayes, McCurtain, Payne, and Pontotoc counties.

#### *Belostoma flumineum* (Say)

Characteristics: Length 20-27 mm, width 11-18 mm.

Distribution: Beaver, Cherokee, Cleveland, Comanche, Delaware, Love, Marshall, Mayes, Payne and Pontotoc counties.

#### *Lethocerus* Mayr

Characteristics: Body elliptically shaped; hemelytral membrane well developed, wider than clavus; abdominal sternites five and six subdivided laterally by a suture-like fold; spiracles located on or adjacent to mesal margins of ventral laterotergites.

#### *Lethocerus griseus* (Say)

Characteristics: Length 55-65 mm, width 18-22 mm; anterior femora not grooved for reception of tibiae.

Distribution: Cleveland, Oklahoma and Payne counties.

#### *Lethocerus americanus* (Leidy)

Characteristics: Length 50-55 mm, width 19-21 mm; interocular space subequal to width of an eye.

Distribution: Cleveland, Mayes and Pontotoc counties.

#### *Lethocerus uhleri* (Montandon)

Characteristics: Length 40-48 mm, width 16-18 mm; interocular space narrower than width of an eye.

Distribution: Pontotoc County.

SALDIDAE

Literature helpful in working with the Saldidae includes: Blatchley (1926), Chapman (1962), Drake (1949), Drake and Hoberlandt (1951), Drake and Hottes (1950) and Wilson (1958). Schaefer and Drew (1964) erroneously reported *Pentacora sphacelata* (Uhler) from the state. We now add *Saldula coxalis* (Stal) and *Micracanthia quadrimaculata* (Champion) to the list.

Characteristics: Front of head almost vertical; ocelli present; compound eyes large; beak three-jointed; scutellum large, triangular, almost equilateral; hemelytra without cuneus; membrane with four or five long cells; legs slender, hind pair longest, coxae broad, fitted for leaping; tarsi three-jointed, first short, second and third usually subequal.

KEY TO THE SPECIES

1. Membrane of hemelytra with five closed cells ..... 3  
    Membrane of hemelytra with four closed cells ..... 2
2. Veins of corium obsolete ..... 4  
    Veins of corium more or less distinct, median vein apically forked.. 5
3. Lateral margins of pronotum and elytra with row of very short erect setae ..... *Pentacora signoretti*  
    Lateral margins of pronotum and elytra without row of setae ..... *Pentacora ligata*
4. Two transverse light yellow spots on costal area of hemelytral corium ..... *Micracanthia quadrimaculata*  
    Entire costal area of hemelytral corium light yellow ..... *Micracanthia humilis*
5. Dorsal vestiture of thorax and hemelytra with many long, dark erect hairs ..... 6  
    Dorsal vestiture of thorax and hemelytra smooth or only short pubescence, sometimes appressed ..... 7
6. Length 6-6.3 mm ..... *Saldula confluenta*  
    Length 3.5-4.5 mm ..... *Saldula orbiculata*
7. Pronotum with lateral margins yellowish ..... *Saldula coxalis*  
    Pronotum with lateral margins black ..... 8
8. Length 6-8 mm ..... *Saldula lugubris*  
    Length 4-5.5 mm ..... *Saldula pallipes*

*Micracanthia* Reuter

Characteristics: Hemelytral corium lacking distinct veins, median vein not forked apically, membrane with four closed cells.

*Micracanthia humilis* (Say)

Characteristics: Length 3-3.7 mm; entire costal area of corium light yellow.

Distribution: Atoka, Beaver, Cherokee, Coal, Johnston, LeFlore, McCurtain and Payne counties.

*Micracanthia quadrimaculata* (Champion)

Characteristics: Length 2.5-3 mm; two transverse light yellow spots on costal area of corium; pubescence silvery.

Distribution: Payne county.

*Pentacora Reuter*

**Characteristics:** Hemelytral membrane with five elongate equal cells

*Pentacora ligata* (Say)

**Characteristics:** Length 5.5-6.1 mm; color above, black, thickly clothed with grayish pubescence; narrow reflexed margins of pronotum and hemelytra, two small spots on hind margin of pronotum, four on scutellar margin, one on apical third of clavus and six or eight on corium and embolium, dull yellow; edges of yellow costal margin of hemelytra and yellow pronotal border dark; membrane dark brown; under surfaces black hind margins of all abdominal segments pale yellow; legs dull yellow with black stripes.

**Distribution:** Cherokee, Comanche, Johnston, Latimer, Love, Muskogee, Osage, Payne and Sequoyah counties.

*Pentacora signoreti* (Guerin)

**Characteristics:** Length 6.5-8.0 mm; color above yellow and black black markings between eyes. Dorsum dark, except light areas as follows: on middle and front of pronotum, a small quadrate spot at middle and a rounded spot on each humeral angle of hind pronotal lobe, scutellum with two spots near apex, clavus with a spot behind middle, and three spots or embolium. Under surface largely black; legs brownish; apical half of femora darker; tibiae with black setae.

**Distribution:** Alfalfa, Dewey and Marshall counties.

*Saldula Van Duzee*

**Characteristics:** Hemelytral corium with distinct veins, median vein forked apically, membrane with four closed cells.

*Saldula confluenta* (Say)

**Characteristics:** Length 6-6.3 mm; color generally dark; hemelytral costal margin with two transverse pale areas of width subequal to alternating dark areas; membrane with a few scattered pale spots; legs dull yellowish red, apices of joint darker.

**Distribution:** Choctaw and McCurtain counties.

*Saldula orbiculata* (Uhler)

**Characteristics:** Length 3.5-4.5 mm; color black, clothed with erect hairs as in *S. confluenta*, also with fine yellowish pubescence; hemelytral costal area dull yellow, except base and small spot at apex dark; corium and membrane dark; one dark spot at middle of corium and several vague bluish spots; legs dull yellow.

**Distribution:** Drake and Hoberlandt (1951) give distribution as east of Rocky Mountains.

*Saldula coxalis* (Stal)

**Characteristics:** Length 3-3.6 mm; pronotal lateral margin with narrow pale stripes usually visible from both above and below. These stripes usually terminate slightly before reaching the front and hind margins.

**Distribution:** Beaver and Marshall counties.

*Saldula lugubris* (Say)

**Characteristics:** 6.5-8 mm; color dull blackish with or without brownish or yellowish spots on hemelytra; pubescence dense, moderately long.

with dark golden color.

Distribution: Choctaw county.

*Saldia pallipes* (Fabricius)

Characteristics: Length 3.5-5.5 mm; color usually black, clothed with fine golden yellowish pubescence; hemelytra varying from predominantly pale to black; intermediate forms with anterior transverse bands interrupted or obscured; legs dull yellow, often marked with vague brownish lines and dots.

Distribution: Alfalfa, Beaver, Craig, Harper, Hughes, Love, Marshall, Mayes, McCurtain, Okmulgee, Osage, Payne and Sequoyah counties.

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