Twenty-four species of cicadas have been collected in Oklahoma. The purpose of this paper is to provide a convenient means by which these species may be identified. Four additional species that are likely to occur in the state have been included. Specimens examined may be found in the K. C. Emerson Entomology Museum, Oklahoma State University, and the Stovall Museum, University of Oklahoma.

Cicadas are most frequently observed during the late spring and throughout the summer. The peculiar vibrating sound produced by the males, often in chorus with numerous other males, is a familiar sound. Cicadas are typically found on tall grasses or clinging to the trunks and branches of trees. Female cicadas deposit their eggs under the bark of young tree branches and may cause appreciable damage.

Numerous articles by Davis (1-19) provide descriptions of Oklahoma species of cicadas. Papers by Lawson (20), Froeschner (21), and Simons (22) were of particular help in the preparation of this paper. The synonymy followed here is that of Metcalf (23) and Alexander and Moore (24). The distribution records are from specimens and records of the two above-mentioned museums as well as from the above literature.

KEY TO OKLAHOMA CICADIDAE

1. Medius (M) and cubitus (Cu) leaving arcus separately (Fig. 3. G) ______ 2
   Veins M and Cu leaving arcus together (Fig. 2. A) __________________________ 7

2. Thorax almost entirely black, wing veins or basal areas of wings orange 3
   Coloration not as described above ______ 8

3. Anterior-most cross veins of front wings not clouded ________________________ 4
   Anterior-most cross veins of front wings covered by dark clouds ______ 5

4. Wing spread 50 mm or more ________ ____________ Ribiccinoides basperia
   Wing spread 45 mm or less ____________ Okanagama symodica

5. Propleura reddish, lighter than pronotum ____________ Magicicada septendecim
   and Magicicada tredecim
   Propleura not reddish ____________ 6

6. Abdominal sternum black with a narrow apical band of brown or yellow, bands often interrupted medially; last tarsal segment with apical half or more black ______ Magicicada cassini
   and Magicicada tridecassini
   Abdominal sternum with brown or yellow apical bands, bands not interrupted;
   last tarsal segment brownish or yellow with at most the apical third dark ______
   Magicicada septendecim
   and Magicicada tredecim

7. Number of cells anterior to Cu of hind wing reaching to wing margin is seven
   ____________ Cicadetta calliope
   Number of above cells is six ____________ Cicadetta hansa

8. Body length 15 mm or less ________ 9
   Body length greater than 15 mm __ 10

9. Head distinctly wider than anterior margin of pronotum; general coloration
   black and straw yellow ____________ Pacarina puella
   Head slightly wider than front of pronotum; head and thorax light colored,
   without black ____________ Beameria venosa

10. 7th marginal cell of front wing little or any longer than wide ____________
    Casama velenata
    7th marginal cell 1½ times or longer than wide ____________ 11

11. Longitudinal veins of front wings clouded at apices ____________
    Neocicada biergolbica
    Longitudinal veins of front wings not clouded ____________ 12

12. Anterior-most cross vein almost vertical (angle greater than 45°) (Fig. 1.
    G) ____________ 13
    Anterior-most cross vein strongly oblique (slanting at an angle of 45°)
    (Fig. 2. H) ____________ 15

13. Head and pronotum grassy green ____________ Diceroprocta attesca
    Head and pronotum mostly black or black marked with light brown ______

14. Cross veins infuscated ____________ Diceroprocta tugraphica
Cross veins not infuscated.  


Diceroprocta vitripennis

15. Length of body less than 28 mm  
16. Basal cell with a black mark; cross veins infuscated.  
Base cell clear; cross vein clear.  


Tibicen auriferus

17. Collar of pronotum light colored  
18. Dorsum of pronotum black  


Tibicen superbus

19. Wing length more than 50 mm  
20. Dorsum of abdomen with pruinose spots  
21. Posterior margin of abdominal tergites edged with green or pale band  


Tibicen dealbatus

22. Cross veins without distinct clouds  


Tibicen walkeri

23. Mesonotum mostly black; sternum of abdomen without a medium dark black band  
Mesonotum with less than ½ the area black; sternum of abdomen usually with a medium dark band  


Tibicen pruinatus

24. Mesonotal disk black with a thin W pattern; lateral areas of mesonotum black  
Mesonotal disk without a W or at most a confused W pattern; lateral areas brown  


Tibicen lyricen

**DESCRIPTIONS AND COUNTY DISTRIBUTION**

*Beameria venosa* (Uhler) (Fig. 1. A). Length: 12-13 mm. Veins M and Cu leave arculus separately instead of as a single vein, as in *Cicadetta*. The anterior two cross veins, especially the first, are nearly perpendicular and located very near the middle of the cells anterior and posterior to them. Light green color. Dark markings wanting except for 2-4 brown bands extending posteriorly from the pronotal collar of some individuals.

County records. Cimarron, Cleveland, Cotton, Major, and Pawnee; June-July.

*Cacama valvata* (Uhler) (Fig. 1. C). Length: about 25 mm. Abdominal segments short; thus, a blunt appearing abdomen. Coloration black except for light ridges on the cruciform elevation and some very small spots on the pronotum and mesonotum. Some white pruinose may occur on sides or apex of abdomen.

County records. Cimarron and Harmon; June-July.

*Neocicada hieroglyphica* (Say). (Fig. 1. E). Length, about 20-25 mm. Head and thorax yellowish-green with black markings in the form of numerous lines and spots. Abdominal tergites straw-colored, lacking dark markings except for the last tergite which is usually black.

County records. Adair, Delaware, Latimer, and Payne; June-July.

*Cicadetta calliope* (Walk). Fig. 2. A). Length: about 12-15 mm. At the base of the forewing, veins M and Cu leave the arculus as a single vein which divides shortly. The anterior cross veins are oblique and located distinctly before the middle of the cells anterior and posterior to them.

County records. Craig, Grady, Noble, Nowata, and Payne; June.

*Cicadetta calliope* (Davis) (Fig. 2. C). Length: about 13 mm. This species looks much like *Cicadetta calliope*. The two are easily separated by characters presented in the key. Also, *C. kansa* is uniformly green without black markings on thorax; *C. calliope* often has black markings on thorax.

County records. Comanche, Cleveland, and Noble; June-July.

*Diceroprocta asteca* (Kirkaldy) (Fig. 1. G). Length: about 21 mm. This species requires no additional description beyond that in the key.

County records. Caddo, Grady, Payne, and Tillman; July.

*Diceroprocta eugraphica* (Davis) (Fig. 1. B). Length: about 18-24 mm. This is a dark-colored species and is immediately distinguishable from *D. asteca* (Kirk) by the lack of green.

County records. Ellis and Woods; August.

*Diceroprocta vitripennis* (Say) (Fig. 1. D). Length: about 20 mm. This species is
usually greenish and black with clear cross
veins. Sometimes the general color will be
more of a straw color.

County records. Almost all counties; known
distribution in the State ranges from
Beaver county to the eastern border; May-
August.

*Magicicada.* This genus consists of the
periodical cicadas or the 17-year cicadas
and the 13-year cicadas. Three species of
17-year cicadas have been identified in
Oklahoma. In addition, an unnamed 13-
year cicada has been reported from Okla-
ahoma (25). That report probably refers to
*Magicicada tredecim* Walsh and Riley.
However, according to the study by Alex-
ander and Moore (24) there are three
species of 17-year cicadas ([*M. septendecim*
(L.), *M. cassini* (Fisher), and [*M. septen-
decula* Alexander and Moore] and three
species of 13-year cicadas (*M. tredcassini*
Walsh and Riley, *M. tredcassini* Alexander
and Moore, and *M. tredcica* Alexander and
Moore). The 17-year cicada and the 13-year
cicada of each pair cannot be distinguished
morphologically; they can be separated if
one knows the length of their life cycles
or, as shown by Alexander and Moore (24),
by their songs.

*Magicicada cassini* (Fisher) (Fig. 1. F).
Length, about 24 mm. Other features as in
the key; 17-year cycle.

County records. Many counties of north-
eastern half of Oklahoma; May-June.

*Magicicada septendecim* (L.) (Fig. 1.
H). Length, about 28-30 mm. Other fea-
tures as in the key; 17-year cycle.

County records. Carter, Jefferson, Paw-
nee, and Stephens; May-July.

*Magicicada septendecula* Alexander and
Moore. Length, 19-27 mm. Other features
as in the key; 17-year cycle.

County records. Payne; June.

*Magicicada tredcassini* Alexander and
Moore. Description is same as that of *M.
cassini* (Fisher); 13-year cycle.

*Magicicada tredcicim* Walsh and Riley.
Description is same as that of *M. septen-
decim* (L.); 13-year cycle.

*Magicicada septendecula* Alexander and
Moore. Description is same as that of *M.
septendecula* Alexander and Moore; 13-
year cycle.

*Okanagama synodica* (Say). Length,
about 15-19 mm. This species has not been
reported from Oklahoma; it has been col-
lected in Kansas and Texas, and, therefore,
is included in the key.

*Pacarina puella* Davis (Fig. 2. E).
Length, about 13 mm. Medius and cubitus
veins of the forewing leave the arculus
separately. The anterior-most cross vein is
nearly perpendicular. Cross veins are infus-
cated. Body background is light straw-
colored with prominent black markings on
the head, pronotum, and mesonotum.

County records. Harmon and Carter;
June-July.

*Tibicen aulites* (Germar) (Fig. 2. G).
Length, about 40-44 mm. Members of this
species reach a greater average length than
that of any other Oklahoma species. *T.
aulites* can be distinguished from others of
nearly the same size by its more extensive
black marking and lack of dorsal row of
pruinose spots on the abdomen.

County records. Atoka and Sequoyah;
June-July.

*Tibicen auriferus* (Say). Length, 23-26
mm. Basal cell clear, as is the cross vein;
abdomen with blackish tergites.

County records. Ellis, Grant, Harper, and
Payne; August-October.

*Tibicen chloromerus* (Walker) (Fig. 2.
B). Length, about 32-36 mm. This species
is about the same size as *T. lyricen*, but
the two can be separated by color. Al-
though both are predominately black, *T.
chloromerus* is marked with green, whereas,
*T. lyricen* is marked with reddish brown.

County records. Cleveland, Pottawatomie,
and Sequoyah; July-August.

*Tibicen dealbatis* (Davis) (Fig. 2. D).
Length, about 35 mm. Head yellowish-
green; thorax greenish marked with black;
abdominal tergites black with pruinose
spots and with posterior margins brown or
yellowish.

County records. Found in almost all
counties, including those at the extreme
corners of the state; July-October.
Tibicen dorsatus (Say) (Fig. 2. F). Length, 31-38 mm. In males the uncus, when viewed caudally, appears to be triangular; the last ventral segment of the female has a rounded notch in the posterior margin which reaches about half way to the base; coloration of species resembles that of T. dorsatus, T. dealbatus, and T. walkeri.

County records. Caddo, Cleveland, Cimarron, Kay, Kiowa, Pawnee, Payne, Tillman, Woods, and Woodward; June-August.

Tibicen inauditus (Davis) (Fig. 2. H). Length, about 21 mm. A longitudinal black mark on the basal cell of the forewing is unique and characteristic of this species; black is the dominant color and there are limited straw-colored markings; posterior margin of the hind collar of pronotum is light and anterior margin is black.

County records. Most counties including the extreme corners of the state; July-August.

Tibicen lyricus (De Geer) (Fig. 3. A). Length, about 31-34 mm. Color is very distinctive, i.e., black with fulvous markings on the thorax and base of forewings green; forewings infuscated.

County records. Most counties including the extreme corners of the state; July-August.

Tibicen pruinipus (Say) (Fig. 3. C). Length, 29-37 mm. The species closely resembles T. resb. Average length, about 32 mm. The black markings on each side of the W mark taper posteriorly and may disappear, whereas in T. resb they are more extensive and reach the cruciform elevation. The first cross veins of the forewings are distinctly darkened.

County records. Collected from counties of the northeastern half of Oklahoma; July-October.

Tibicen resb (Haldeman) (Fig. 3. E). Length, 32-35 mm. Abdominal tergites are black with posterior borders often brown; head mostly black; thorax brownish-green, green, and black. First cross veins of forewings distinctly darkened. See number 23 in key for additional information.

County record. Collected from counties throughout the state; June-August.

Tibicen superbus (Fitch) (Fig. 3. B). Length, about 32 mm. Extensive green color over head and thorax make this species readily distinguishable; only dark markings on the head and thorax are a black region between the eyes and four black areas which are usually present immediately behind the collar of the pronotum.

County records. Comanche, Kay, Kiowa, Payne, and Woods; July-August.

Tibicen walkeri Metcalf (Fig. 3. D). Length, 36-39 mm. A dorsal row of pruinose spots is lacking on the abdomen; first two cross veins of forewings are frequently not at all darkened; costal margin of forewing distinctly bent near the middle.

County records. LeFlore, McCurtain, Muskogee, Okfuskee, Pawnee, and Payne; July-August.

Tibicinoides hesperia (Uhler) (Fig. 3. F). Length, about 20 mm. Wing flaps marked with bright red-orange; longitudinal veins heavily infuscated from their bases to the cross veins; abdominal tergites light straw-colored except for a black median stripe tapering distally.

County records. Cimarron; June.

REFERENCES