

THE UNDERWING MOTHS (LEPIDOPTERA:NOCTUIDAE) OF OKLAHOMA

John M. Nelson

Department of Natural Sciences, Oral Roberts University, Tulsa, Oklahoma 74171

and

Peter W. Loy

Tahlequah, Oklahoma 74464

Records of 35 species of underwing moths collected in Oklahoma are presented. They are *Catocala abbreviatella*, *C. agrippina*, *C. amatrix*, *C. amestris*, *C. amica*, *C. andromedae*, *C. cara*, *C. coccinata*, *C. connubialis*, *C. consors*, *C. dejecta*, *C. delilah*, *C. epione*, *C. frederici*, *C. herodias*, *C. ilia*, *C. illecta*, *C. innubens*, *C. insolabilis*, *C. judith*, *C. junctura*, *C. lacrymosa*, *C. maestosa*, *C. micronympha*, *C. nebulosa*, *C. neogama*, *C. nuptialis*, *C. palaeogama*, *C. piatrix*, *C. robinsoni*, *C. similis*, *C. ulalume*, *C. ultronia*, *C. vidua*, and *Euparthenos nubilis*. Brief descriptions, county records, and a key to the species listed are included.

For a group as well-studied and popular as the butterflies and moths, the lepidopteran fauna of Oklahoma is poorly known. Checklists and/or keys for only three groups of Lepidoptera in the state have been published: the tiger moths (1), the sphinx moths (2), and the butterflies and skippers (3). The present compilation of data is an attempt to further the knowledge of the state fauna.

The underwing moths, which are generally limited to those species in the genus *Catocala* but may include a few other closely related species, are among the larger and more showy moths when the wings are spread. Their cryptic coloration and sitting habits make them very difficult to see in their natural habitat. As such, they have attracted a great deal of attention from investigators studying natural selection, cryptic and aposematic coloration, niche selection, etc.

Since the larvae feed on various trees and shrubs, they might be expected to be of some economic importance but this rarely seems to be the case. They are only mentioned as being of minor importance in the eastern U.S. forests (4) and are not even listed in the insects of western forests (5). The only published record of *Catocala* in Oklahoma that we have found reported is the alligator worm, a pest on pecan (6). The *Catocala* have been divided into groups based on the larval food (7). Our data show that the hickory-walnut feeders are the most numerous species in the state with the oak feeders next most abundant.

The number of species in the eastern U.S. appears to be greater than in the midwest and west but this may be the result of more intensive collecting there. More than 50 species have been reported from the state of New York (4), whereas we have now obtained records of only 34 species of *Catocala* in Oklahoma. We estimate that this represents about 65-75% of the total in the state. More species are expected to be in the eastern half of the state, where the food plants are more readily available.

Our collecting methods have been limited to collecting around lights, both black and white, and examining the trunks of large trees in suitable habitats. Neither of us has used the "sugaring" method espoused by some collectors (8). Most of our collecting activities have been confined to northeastern Oklahoma. Additional records have been obtained from various institutions in the state and are identified in the species list.

We have prepared a key to all the species collected in the state. It will need to be modified as more species are taken. The authors solicit additional state and county records and will be glad to make determinations of specimens. An annotated list of the species is given. No illustrations are presented here, as color plates of all species are readily available (7,8,9). We have tried

to give the more obvious distinguishing characteristics of each species, including wing span. Barnes and McDunnough (7) divided the genus into three sections on the basis of leg spination as follows:

Section 1—all tibiae spined and tarsi having a fourth row of irregular spines;

Section 2—fore tibia unspined and tarsi with only three rows of spines;

Section 3—both fore and hind tibia without spines.

Only a few generalizations can be made at this time regarding our local fauna. These include the following:

1. Wing span (size) is rather consistent in these moths and can be used to place them in the right species in many cases.
2. All the hickory, pecan, and walnut feeders fall in Section 1 with only one other species (*C. innubens*) assigned to this group.
3. All species with black hind wings, except—*C. andromedae*, are in the hickory- and walnut-feeding group.
4. The patterns, colors, and presence of hairs on the undersides of the wings may be as helpful, or more so, in identifying species than those on the upper sides.

KEY TO THE UNDERWING MOTHS LISTED

- | | |
|---|----------------------------|
| 1a. HW with some shade of red or yellow ----- | 2 |
| b. HW black, without red or yellow ----- | 25 |
| 2a. HW with 4 black lines on dark yellow----- | <i>Euparthenos nubilis</i> |
| b. HW with no more than 2 black lines----- | 3 |
| 3a. Wing span of spread forewings less than 50 mm----- | 4 |
| b. Wing span of spread forewings greater than 50 mm----- | 11 |
| 4a. FW light gray-brown, uniformly colored with black reniform and distinct black lines on costal one-third;
HW with continuous outer black band ----- | <i>C. nuptialis</i> |
| b. FW colored otherwise; HW with outer black band broken leaving a black dot at anal angle ----- | 5 |
| 5a. HW with broad outer black band; no inner band ----- | <i>C. amica</i> |
| b. HW with both outer and inner black band ----- | 6 |
| 6a. Hind tibia with spines----- | 7 |
| b. Hind tibia without spines----- | 9 |
| 7a. FW yellow-brown; HW yellow ----- | <i>C. frederici</i> |
| b. FW brownish gray; HW yellow-orange ----- | 8 |
| 8a. FW uniformly colored with narrow black lines on anterior half ----- | <i>C. abbreviatella</i> |
| b. FW more contrasting in color, dark lines on anterior half wide ----- | <i>C. amestris</i> |
| 9a. FW with small, pale triangle along costa at apex; reniform appears drop-shaped; pm line almost straight;
HW more yellow ----- | <i>C. similis</i> |
| b. FW more variable in color; reniform not drop-shaped; pm line serrated; HW more orange----- | 10 |
| 10a. FW usually darker outside pm line; outer black band on HW ends abruptly and squarely on outer margin
----- | <i>C. connubialis</i> |
| b. FW usually lighter outside pm line; outer black band on HW more rounded at end----- | <i>C. micronympha</i> |
| 11a. Ground color of HW uniform; few or no dark hairs at base ----- | 12 |
| b. HW with numerous dark hairs at base making it much darker ----- | 17 |
| 12a. Ground color of HW yellow to yellow-orange----- | 13 |
| b. Ground color of HW red-orange to scarlet ----- | 14 |
| 13a. HW ground color yellow; outer black band complete; FW is uniformly gray with fine black lines
----- | <i>C. illecta</i> |
| b. HW ground color yellow-orange; outer black band incomplete with black dot at anal angle and large orange
spot at apex ----- | <i>C. delilah</i> |

- 14a. Wing span less than 70 mm; FW red beneath -----15
 b. Wing span greater than 70 mm; FW white beneath -----16
- 15a. FW light gray with contrasting markings; HW with inner black band broad and smooth -----*C. coccinata*
 b. FW gray-brown with narrow stripes on posterior half; HW with inner black band narrow and scalloped
 ----- *C. herodias*
- 16a. Inner black band on HW wide and extending to margin; wings beneath yellow with black bands and
 posterior half of HW red-orange ----- *C. amatrix*
 b. Inner black band on HW narrow, not reaching margin but hooked back toward base; wings below nearly
 white with black bands, except most of HW is orange----- *C. junctura*
- 17a. Ground color of HW red or red-orange -----18
 b. Ground color of HW yellow or orange-----21
- 18a. HW deep scarlet with broad, even black bands; FW with light cream ground color beneath -----*C. cara*
 b. HW more orange with uneven black bands; FW with some yellow or orange underneath-----19
- 19a. Outer band on under FW uneven with some red; wing span greater than 70 mm----- *C. ilia*
 b. Outer black band on under FW even, cream or white; wing span less than 65 mm-----20
- 20a. HW orange with lightly barred cream fringe; hind tarsi with 4 rows of spines ----- *C. innubens*
 b. HW red with narrow white fringe, heavily barred; hind tarsi with 3 rows of spines -----*C. ultronia*
- 21a. FW with area inside am line and at apex much darker than rest of wings; fringe of HW broad and orange
 like rest of wing ----- *C. nebulosa*
 b. FW without darker base and apex; fringe of HW narrow and lighter than rest of wing -----22
- 22a. Basal hairs on HW dark and numerous, almost obscuring inner orange area; orange pm band narrow and
 sharply angulate; basal area of wings below with numerous gray hairs -----*C. palaeogama*
 b. Basal hairs on HW less prominent; orange pm band wider or more scalloped; basal area below more
 uniformly colored -----23
- 23a. Wing span greater than 70 mm; HW with yellow pm band narrow and irregularly zigzagged----- *C. consors*
 b. Wing span greater than 70 mm; pm band wider and smoother or scalloped-----24
- 24a. FW with light-colored band extending from subreniform spot along am line to costal margin, fringe of HW
 lightly barred and lighter in color than rest of wing ----- *C. piatrix*
 b. FW without light band or else subreniform is closed; fringe of HW only slightly lighter in color than rest of
 wing ----- *C. neogama*
- 25a. Wing span less than 50 mm -----26
 b. Wing span greater than 50 mm -----27
- 26a. FW uniformly gray above; HW without white margin; bands on underside pale or indistinct; heavy gray
 shading at base ----- *C. judith*
 b. FW above more contrasting light and dark; HW with white apex; underside of FW with broad white pm
 band, no gray at base ----- *C. andromedae*
- 27a. FW with pm line squared, and with a brown band and then a light band just outside the line; HW black
 with pure white fringe and no barring ----- *C. epione*
 b. FW with pm line more distinctly serrated and not banded as above; white fringe on HW either barred or
 lacking-----28
- 28a. HW lacking white fringe; underwings with bands faint or absent, but with a wide gray basal area
 ----- *C. insolabilis*
 b. HW with barred white fringe; underwings with distinct bands-----29

- 29a. HW above deep black with heavy dusting of contrasting light gray hairs at base ----- *C. maestos*
 b. HW without light gray basal area, or wing is brownish-black-----30
 30a. HW beneath with basal area dark gray; white pm band of both wings uniformly wide below -----*C. vidua*
 b. HW beneath with light basal area; white pm band narrower and more irregular -----31
 31a. Both wings yellowish beneath-----32
 b. FW below yellowish; HW below white-----33
 32a. FW light gray or gray-brown; undersides with all bands prominent ----- *C. robinsoni*
 b. FW dark gray-brown; pm bands beneath narrow and irregular ----- *C. agrippina*
 33a. FW light gray with wide pale area extending from subreniform to costal margin; HW with light bands
 below often showing through above and light gray dusting at base -----*C. dejecta*
 b. FW dark gray or brownish-gray with heavy black pm line; HW dark with dusting of brownish hairs at base
 -----34
 34a. FW dark and rather uniformly colored; reniform prominent-----*C. ulalume*
 b. FW dark but more contrasting; reniform not so apparent ----- *C. lacrymosa*

SPECIES ACCOUNT

This list includes all the species that we have seen from Oklahoma. Source of the records are as follows: ECU - East Central University; OSU - Oklahoma State University; OUBS - University of Oklahoma Biological Station; and USAO - University of Science and Arts of Oklahoma. All other specimens were collected by the authors and are in their collections. Some species have named "forms" but these are not included here. Determinations were made or confirmed by the authors. Most of the specimens from OSU had been previously identified by Dr. A. E. Brower.

Euparthenos nubilis (Hübner)

Wing span 60-70 mm. This species is easily mistaken for a *Catocala* because of its size and habit of sitting on the trunk of large trees. It is readily identified by the presence of four black bands on the HW instead of one or two as in *Catocala*.

Records: Atoka, Atoka Co., June, OSU; Zena, Delaware Co., June; Locust Grove, Mayes Co., May, August; Belle Starr Park, McIntosh Co., May. Taken at black light and on tree trunks.

HICKORY AND WALNUT FEEDERS

All our species in this group belong in Section 1. The only other species assigned to this Section is *C. innubens*.

Catocala piatrix Grote

Wing span 70-80 mm. FW dark brown-gray, darkest at base with a light band extending diagonally inward from the reniform to costal margin; HW dark yellow or yellow-orange with black bands and dark basal hairs.

Records: Hinton, Caddo Co., July, OSU; Thomas, Custer Co., July, OSU; Chickasha, Grady Co., October, USAO; Claremore, Rogers Co., July-August.

Catocala consors (Smith & Abbot)

Wing span 60-70 mm. FW dark gray, with black am and pm lines, brown band outside pm line, reniform light; HW yellow-orange with pm orange band narrowed and irregularly zigzagged.

Records: Muse, LeFlore, Co., June, OSU; Sherwood, McCurtain Co., June, OSU; Ft. Gibson, Muskogee Co., July, OSU.

Catocala epione (Drury)

Wing span 55-65 mm, HW black with pure white fringe and no barring makes this species easy to identify.

Records: Tahlequah, Cherokee Co., June; Muse, LeFlore Co., June, OSU; Game Refuge, McCurtain Co., July, ECU; Stillwater, Payne Co., June-August, OSU; Pontotoc Co., June, ECU; Claremore, Rogers Co., June-July; Lake Bixhoma, Wagoner Co., June. Taken on tree trunks and at light.

Catocala robinsoni Grote

Wing span 60-75 mm. FW above light

gray to brownish, anterior half of am and pm lines black, with light brown band outside pm line; HW black with lightly barred white fringe and a light dusting of gray hairs at base; wings beneath with prominent light cream bands, inner band on FW wide and ending abruptly before reaching inner margin, outer band narrows to a point at inner margin.

Record: Tulsa, Tulsa Co., July.

Catocala judith Strecker

Wing span 45-50 mm. FW uniformly colored light gray with some black spots or lines; HW black, without white apex; underwings black with bands pale or indistinct and heavy gray shading at bases.

Records: Chickasha, Grady Co., July, USAO.

Catocala agrippina Strecker

Wing span 75-85 mm. FW gray-brown; HW black with barred white fringe; wings more yellow than white beneath with pm band narrow and irregular.

Records: Ft. Gibson, Muskogee, July, OSU; Stillwater, Payne Co., June-July, OSU; Pontotoc Co., June; ECU; Claremore, Rogers Co.; Grandfield, Tillman Co., July, OSU; Bixby, Tulsa Co., July. Taken on tree trunks in woods.

Catocala ulalume Strecker

Wing span 60-70 mm. FW dark gray with a conspicuous, wide white line extending from reniform obliquely inward to costal margin; HW black with narrow white fringe.

Records: Ada, Pontotoc Co., July, OSU.

Catocala dejecta Strecker

Wing span 60-70 mm. FW dark gray with a conspicuous, wide white line extending from reniform obliquely inward to costal margin; HW black with narrow white fringe.

Records: Robbers Cave State Park, Latimer Co., September.

Catocala insolabilis Guenée

Wing span 65-75 mm. HW black with dusky fringe; undersides of wings all black except for whitish basal area.

Records: Chickasha, Grady Co., July, USAO; Ada, Pontotoc Co., July, OSU.

Catocala vidua (Smith and Abbot)

Wing span 70-80 mm. FW light gray with prominent black markings; HW black with white fringe and inconspicuous barring; HW beneath with basal area dark gray; white pm band of both wings wide.

Records: Osage Hills State Park, Osage Co., October; Stillwater, Payne Co., September, OSU.

Catocala maestosa (Hulst)

Wing span 80-90 mm. This is our biggest *Catocala*. FW light gray, similar to *C. vidua*; HW more heavily barred on white fringe and with a heavy dusting of contrasting gray hairs at base above.

Records: Hinton, Caddo Co., July, OSU; Sequoyah State Park, Cherokee Co., September; Game Refuge, McCurtain Co., June, ECU; Stillwater, Payne Co., Fenton (6) as *C. viduata*, and August, OSU; Ada, Pontotoc Co., July, OSU; Claremore, Rogers Co., July-August; Bixby, Tulsa Co., September. Taken on tree trunks in heavily wooded areas.

Catocala lacrymosa Guenée

Wing span 60-70 mm. FW dark gray, often marked with brown and with a heavy black pm line; HW black with barred white fringe; FW yellow below with pm band incomplete; HW below white with narrow, irregular pm band.

Records: Ada, Pontotoc Co., July, OSU; Bixby, Tulsa Co., September. Taken at black light.

Catocala palaeogama Guenée

Wing span 60-70 mm. FW variable in color from light gray to dark gray, with heavy black am and pm lines; HW orange with orange apex and fringe, basal area covered with dark hairs; basal area of both wings below with gray hairs.

Records: Tahlequah, Cherokee Co., June; Chickasha, Grady Co., July, USAO. Taken at light and on tree trunk.

Catocala nebulosa H. W. Edwards

Wing span 75-85 mm. Readily recognized by the reddish-brown FW with a deep brown basal area and dark brown triangle at apex, anal angle may be darker also;

HW yellow with black bands and dark hairs at base.

Records: Spring Creek, Mayes Co., August; Game Refuge, McCurtain Co., July, ECU.

Catocala neogama (Smith & Abbot)

Wing span 70-85 mm. FW medium to dark gray with brownish markings; HW dark yellow-orange with lighter fringe, lightly barred; pm band narrow, irregular, heavy dusting of dark hairs at base and along inner margin; undersides light yellow-orange and black.

Records: Hinton, Caddo Co., July, OSU; Ada, Pontotoc Co., July, OSU.

OAK FEEDERS

Section 2 species

Catocala ilia (Cramer)

Wing span 70-80 mm. Color and pattern of FW variable; HW orange with inner black band somewhat moniliform; underside of FW with some red or orange color present.

Records: Little River State Park, Cleveland Co., June; Wichita Mountains, Comanche Co., June, OSU; Zena, Delaware Co., June; Muse, LeFlore Co., July, OSU; Locust Grove (Spring Creek), Mayes Co., July-August; Eagletown, McCurtain Co., June, OSU; Stillwater, Payne Co., June, OSU; Ada, Pontotoc Co., July, OSU; Claremore, Rogers Co., June; Bixby and Tulsa, Tulsa Co., May-June.

Catocala delilah Strecker

Wing span 60-65 mm. FW gray-brown with prominent black am and pm lines; HW deep yellow, inner black band narrow and reaching inner margin, large yellow spot at apex, barring on fringe faint; underside of wings deep yellow with black bands.

Records: Ardmore, Carter Co., June, OSU; Wichita Mountains, Comanche Co., June, OSU; Stillwater, Payne Co., OSU. Taken at bait.

Catocala frederici Grote

Wing span 40-50 mm. FW yellowish-brown; HW yellow with narrow black bands, both ending before reaching inner margin, small dot at anal angle; undersides colored as above with hind wing marked like upper side.

Record: Lugert, Kiowa Co., June, OSU. This is a western species.

Catocala herodias Strecker

Wing span 55-65 mm. FW dark gray, appears narrowly striped on posterior half; HW dark red to crimson with inner black band narrowed and scalloped; undersides bright red with black bands.

Record: Stillwater, Payne Co., June, OSU.

Catocala coccinata Grote

Wing span 60-70 mm. Ground color of HW deep red; FW with underside reddish; HW beneath whitish on upper half and red on lower half.

Records: Little River State Park, Cleveland Co., June; Wichita Mountains, Comanche Co., June, OSU; Marshall Co., June, OUBS; Stillwater, Payne Co., May, June, OSU. At black light.

Section 3 Species

Catocala similis W. H. Edwards

Wing span 40-45 mm. FW has small pale triangle along costa at apex, reniform, appears drop-shaped; outer black band of HW broken with a prominent anal spot; inner black band not extending to edge of wing.

Records: Hinton, Caddo Co., June, OSU; Locust Grove (Spring Creek), Mayes Co., July; Payne Co., June, OSU. At black light.

Catocala connubialis Guenée

Wing span 40-45 mm. FW variable, light to dark gray and with or without markings; HW yellow-orange with inner black band narrow and sometimes ending before reaching margin, a line of black hairs from inner band, just inside inner margin, back to base; outer black band wide, terminating abruptly and squarely, and leaving a black spot at anal angle.

Record: Stillwater, Payne Co., June, OSU. Taken at light.

Catocala micronympha Guenée

Wing span 40-50 mm. Wing coloration highly variable with numerous "forms" described. FW usually with light colored st

line; HW has broad outer band broken with a prominent anal spot, and inner band extending sharply back from near anal angle to base.

Records: Wichita Mountains, Comanche Co., June, OSU; Lugert, Kiowa Co., June, OSU; Muse, LeFlore Co., June, OSU; Locust Grove, Mayes Co., July; Claremore, Rogers Co., June; Bixby, Tulsa Co., June. All taken at black light.

Catocala amica (Hübner)

Wing span 35-40 mm. Easily distinguished by its size and lack of an inner black band on HW. FW quite variable in color and pattern.

Records: Hinton, Caddo Co., July, OSU; Tahlequah, Cherokee Co., July; Little River State Park, Cleveland Co., June; Muse, LeFlore Co., June, OSU; Oswalt, Love Co., July, OSU; Stillwater, Payne Co., June-July, OSU; Ada, Pontotoc Co., July, OSU; Locust Grove, Mayes Co., July. All taken at black light.

HONEY LOCUST AND LEAD PLANT FEEDERS

Section 1 Species

Catocala innubens Guenée

Wing span 55-70 mm. FW variable in color and pattern, usually with a light triangle at apex above; HW with orange ground color and heavy shading of dark hairs at base; underside of HW with cream-colored ground on upper half and orange on lower half.

Records: Little River State Park, Cleveland Co., June; Stratford, Garvin Co., May, OSU; Chickasha, Grady Co., July, USAO; Locust Grove (Spring Creek), Mayes Co., July; Ft. Gibson, Muskogee Co., July, OSU; Ada, Pontotoc Co., July, OSU; Claremore, Rogers Co., June-July. Taken at black light and sitting on tree trunks.

Section 2 Species

Catocala illecta Walker

Wing span 60-70 mm. FW light gray with narrow black lines; ground color of HW yellow, with inner black band wide and ending before inner margin. This species is different from the others in the section in that it has 4 rows of tarsal spines.

Records: Grant, Choctaw Co., July, OSU; Locust Grove and Chouteau (OSU), Mayes Co., May; Stillwater, Payne Co., May-June, OSU; Claremore, Rogers Co., June. Taken both at black light and under bright lights.

Catocala abbreviatella Grote

Wing span 40-50 mm. FW light gray with black lines on anterior half; HW light yellow-orange with narrowed black bands, both ending before reaching margin; black spot at anal angle.

Records: Hinton, Caddo Co., June, OSU; Lake Carl Blackwell, Payne Co., June, OSU.

Catocala nuptialis Walker

Wing span 40-50 mm. FW light gray with black reniform spot and black lines on anterior third; HW yellow ground with broad, continuous outer black band; inner band also broad, rather smooth, ending before margin.

Record: Bixby, Tulsa Co., July. Taken at black light.

Catocala amestris Strecker

Wing span 45-50 mm. FW gray above with heavy dark brownish-black markings on anterior half, resulting from a doubling of am and pm lines and the reniform, demarking these dark areas; HW yellow-orange with inner black band narrowed and angulate, but smoothly outlined; outer black band broad with anal spot.

Records: Hinton, Caddo Co., June, OSU; Wichita Mountains, Comanche Co., June, OSU; Stillwater, Payne Co., June, OSU. Taken at black light.

WILLOW AND POPLAR FEEDERS

Section 2 Species

Catocala junctura Walker

Wing span 70-75 mm. FW delicate gray-brown, HW red-orange with narrow inner black band not reaching margin but hooked back toward base; underside of FW white, HW white on anterior one-fourth and red-orange on rest of wing; both wings with prominent black bands; inner black band on underside of HW just like the one on upper side. This species is in a group of willow feeders having 28 species of which 20 are western in distribution. We expect that this will be the western range limit of this eastern species.

Records: Sequoyah State Park, Cherokee Co., September; Weatherford, Custer Co., OSU; Stillwater, Payne Co., July, OSU; Pontotoc Co., June, ECU; Tulsa, Tulsa Co., July. On trees in dense woods beside lake.

Catocala cara Guenee

Wing span 70-85 mm. FW dark brown, HW deep pink with broad, even black bands, and heavy dusting of dark hairs at base.

Records: Locust Grove (Spring Creek), Mayes Co.; Game Refuge, McCurtain Co., June, ECU; Claremore, Rogers Co., July.

Catocala amatrrix (Hubner)

Wing span 75-85 mm. FW similar to *C. cara* but usually lighter and more gray; HW lighter pink with black bands more irregular in shape and lacking the dark hairs at the base.

Records: Thomas, Custer Co., July, OSU; Ft. Gibson, Muskogee Co., July, OSU; Okemah, Okfuskee Co., July, OSU; Stillwater, Payne Co., July, OSU; Ada, Pontotoc Co., July, OSU; Claremore, Rogers Co., July-August; Bixby and Tulsa, Tulsa Co., September; Bartlesville, Washington Co., July. Taken at lights and on trees.

BLUEBERRY (*VACCINIUM*) FEEDERS

Catocala andromedae (Guenée)

Wing span 40-50 mm. Section 2. FW with contrasting light shading; HW black with white apex; underside of both wings black with white apex and broad, whitish outer band on FW only.

Record: Tahlequah, Cherokee Co., June. At light.

ROSACEAE FEEDERS

Catocala ultronia (Hübner)

Wing span 50-60 mm. Section 3. FW above quite variable, gray to brown to dark brown, but darkened along area of basal dash and with a lighter brown patch at apex; HW orange-red with complete black bands and gray fringe with a white spot at apex.

Records: Hinton, Caddo Co., June, OSU; Wichita Mountains, Comanche Co., June, OSU.

ACKNOWLEDGMENTS

Appreciation is expressed to the following individuals who allowed us access to collections under their supervision: Dr. William Carter, East Central University, Ada; Dr. William Drew, Oklahoma State University, Stillwater; Dr. Rod Stewart, University of Oklahoma Biological Station, Lake Texoma; and Dr. C. M. Mather, University of Science and Arts in Oklahoma, Chickasha.

REFERENCES

1. W. A. DREW, Proc. Okla. Acad. Sci. 42: 93-100 (1962).
2. R. BURTON and W. A. DREW, Proc. Okla. Acad. Sci. 48: 16-22 (1969).
3. J. M. NELSON, Proc. Okla. Acad. Sci. 59: 41-46 (1979).
4. W. L. BAKER, *Eastern Forest Insects*, USDA Misc. Pub. No. 1175, 1972.
5. R. L. FURNISS and V. M. CAROLIN, *Western Forest Insects*, USDA Misc. Pub. No. 1339, 1977.
6. F. A. FENTON, Proc. Okla. Acad. Sci. 19: 71-77 (1939).
7. W. BARNES and J. McDUNNOUGH, Mem. Am. Mus. Nat. Hist. 3: 1-47 (1918).
8. T. D. SARGENT, *Legion of Night: the Underwing Moths*, Univ. of Massachusetts Press, Amherst, 1976.
9. W. J. HOLLAND, *The Moth Book*, Doubleday, New York, N.Y., 1903. (Reprinted and emended 1968, Dover, paperback, New York.)