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**THE ODONATA OF OHIO - A PRELIMINARY REPORT**

Robert C. Glotzhober p. 1 - 30

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# THE ODONATA OF OHIO - A PRELIMINARY REPORT

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## INTRODUCTION

Measured by quantity, there is an extensive amount of information on Odonata in Ohio. A bibliography of all known references to Odonata in Ohio numbers 54 publications. A list of previous Ohio workers includes the names of individuals who have been important not only in Ohio, but in North America Odonata work in general.

The earliest Ohio publication on Odonata was published by David S. Kellicott in 1895. Kellicott was professor of entomology and zoology at Ohio State University from 1888 until his untimely death at age 56 in 1898. Kellicott had over 100 publications to his name and the damselfly *Ischnura kellicotti* Williamson, 1898 was named in his honor.

James S. Hine was associated with the Ohio State University most of his adult life. He was Dr. Kellicott's most active and valuable assistant during Kellicott's survey of Odonata in Ohio, and finished Kellicott's 1899 publication after Kellicott's death. In addition to his work with Odonata, Hine did significant work on Diptera, especially Tabanidae. Hine described as a new species *Gomphus viridifrons* Hine, 1901; was the first collector of *Somatochlora hineana* Williamson, 1931, and worked closely with C.H. Kennedy and E.B. Williamson of the University of Michigan in looking for additional specimens. In addition, two other Odonates are named after him: *Argia hinei* Kennedy, 1918; and *Rhodopygia hinei* Calvert, 1907. From 1926 until his death in 1930 James Hine split his time with the University, and served as the first Curator of Natural History for the Ohio Historical Society.

Donald J. Borror made significant additions to the knowledge of Ohio Odonata between 1935 and 1942. Among other projects beyond the borders of Ohio, he prepared a revision of the Libelluline genus *Erythrodiplax* in 1942. While he continued to work with Odonata, he began to concentrate

more on bird songs, and established what has since become the Borror Laboratory of BioAcoustics at Ohio State University.

Though not as widely known outside of Ohio, three workers in the state deserve brief comment. Homer F. Price was a farmer who lived in northwest Ohio and who devoted an amazing amount of time and energy as an amateur naturalist. At our point in time some folks look askance at amateurs, but Mr. Price is an outstanding example of skill and expertise. He was knowledgeable about birds, Lepidoptera, and of course Odonata. He was assisted with identifications and directed by both Donald Borror of Ohio State University and B. Elwood Montgomery of Purdue University. Thousands of his specimens reside at various museums in the mid-west. T. Edward Perry was a high school teacher in northeast Ohio who worked extensively in Geauga, Lake, and other northeast counties. Upon his untimely death, his extensive collections went to the Cleveland Museum of Natural History. Robert W. Alrutz did an amazing one-man survey of Ohio Odonata which was published in 1959 and 1961. As a professor at Dennison University, he nurtured numerous future biologists - often stressing Odonata in his assignments for study of ecology, behavior, or other biological phenomenon. Bob recently retired from Dennison, and has been an invaluable asset to the current Ohio Survey. Most of his collections have been donated to the Museum of BioDiversity at the Ohio State University.

Despite the wealth of published information that exists, there remains a great lack of information regarding current status of many of the species previously listed. Even common species are not documented for all parts of the state where they might be expected.

In 1990 a group of five workers from various agencies in the state got together and informally began the Ohio Odonata Survey. This

coordinating committee included the author (project coordinator); Robert W. Alrutz of Denison University; Susan Heady of The Ohio State University, Wooster Campus and Stone Lab on Lake Erie; Dwight Moody of the University of Findlay; and Robert A. Restifo from the Ohio Department of Health. Since 1991 the survey has received grant money from the Ohio Division of Wildlife, with funds donated through the "DO SOMETHING WILD!" state income tax checkoff. These funds have provided supplies, mileage for collectors, and have helped pay for computer input time. Most of the field work on the project has been time volunteered by the 5 committee members and dozens of volunteer members of the survey. The volunteers include college professors, elementary school teachers, naturalists, and amateur naturalists with various backgrounds. Identifications are provided or verified by the committee members.

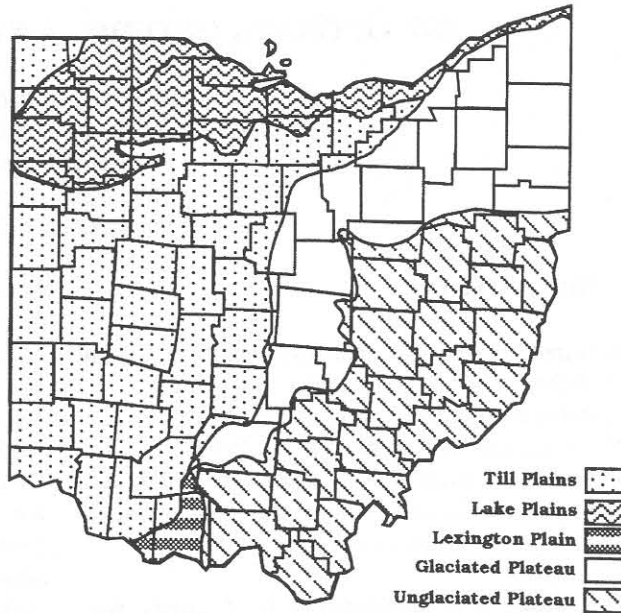
In addition to seeking information on current distribution through field work, the survey team is also seeking data from existing collections. All of the data is entered into a IBM compatible database, using PCFile 5.0 software from Buttonware. Currently the database holds over 15,000 records. These records represent specimens in collections, as no sight records are included.

The survey team anticipates continuing its search for existing collections data and new field data through 1997 before production of a major publication on Ohio Odonata. Any information or comments stimulated by this paper will be appreciated.

### NATURAL HISTORY OF OHIO

Ohio has an abundance of aquatic habitats. The state is bordered on three sides by water, with 440 miles of the Ohio River on the east and south, and 262 miles of Lake Erie shoreline on the north. Over two million acres of Ohio's 28.6 million total acreage are Lake Erie waters. In addition, the state has more than 3,300 named rivers and streams, extending 44,000 miles in length.

Historically Ohio has often been considered the crossroads or gateway for westward expansion beyond the eastern mountain ranges. From a



**PHYSIOGRAPHIC REGIONS OF OHIO**

natural standpoint this is also true. The state contains a dividing line for the maximum advance of glaciation, and intergrades from Appalachian foothill forests to scattered prairies of the central lowlands. Five different physiographic regions have been recognized in Ohio (see map). These vary from the Unglaciated Appalachian Plateau where elevation changes of 300 to 400 feet are common, to the flat and poorly drained Lake Plains. While each of these has its own characteristic flora and fauna, the differences are often small and many of the same species can be found throughout the state. Other than a few species which seem to approach the limits of their range in Ohio, there are very few species that can clearly be divided into physiographic or other regional patterns. What then can we point to for an explanation of Odonata distribution in Ohio? I believe the history of human development of the state has had more impact on current distributions (in general) than physiography.

Ohio ranks 35th in the nation for its area of 41,330 square miles. It ranks 7th, however, in population with its nearly 11 million people. This gives Ohio a human population density of 265.5 people per square mile - ranking 8th highest in the nation. Although agriculture is still Ohio's number one industry, Ohio has numerous large cities. Six of these (Columbus, Cleveland, Cincinnati, Toledo, Akron, and Dayton) have populations of more than 100,000 people, without including their suburbs.

As a result, very few corners of the state have not felt the impact of human population in a significant way.

In 1800, three years before Ohio became a state, 95% of its land area was forested. By 1940 only 12% of Ohio was still forested - an amazing rate of deforestation. Today Ohio is about 30% forested, with the majority of the regrowth in the hilly southeastern portion of the state. Naturally, species of Odonata which favor wooded streams, or forested seeps like *Tachopteryx thoreyi*, had their habitat eliminated or fragmented. In addition, the erosion caused by this deforestation vastly altered the habitat of the states rivers and streams. Added to the siltation from deforestation are the changes caused by damming rivers for navigation and flood control. Pioneer reports from Ohio described streams and rivers as "fair waters, clear and transparent and thick with fish". Starting around 1850 these same rivers were turbid, dark, and dirty. Very few streams (and no rivers) remain which would fit pioneer descriptions. Wetlands covered at least 5 million acres of Ohio in 1800, but by 1992 the state had lost over 90% of these wetlands - second in wetland loss only to California. In 1800 Ohio contained very few lakes or ponds, but during the last 150 years many reservoirs have been built by damming major rivers, and thousands of farm ponds have been constructed. Today Ohio has more than 60,000 lakes, ponds, and reservoirs. The available aquatic habitats therefore have been greatly modified. Finally, since the turn of the century Ohio has seen increasing pollution from both industry and agriculture.

In 1992 the State of Ohio endangered species list included 14% of its original fish fauna, and 37% of its mollusks. In 1820 the Ohio River and its major tributaries contained the highest diversity and abundance of bivalve mollusks in the world. Today, if we add up the extinct mollusks (six species) with those extirpated from the state (six), endangered mollusks (30), and threatened mollusks (six), we find that 61% of the original 79 species have been devastated. Records for Odonata do not go back far enough, nor do we have enough firm data yet to classify many Ohio odonate species. It would appear, however, that a similar pattern exists between bivalve mollusks and Odonata in Ohio.

## EXPLANATION OF THE DATA

The Survey database contains only records that we have been able to relate with specimens in collections. The distributions discussed below include both records from the database and published records. Due to the greatly fragmented pattern of distribution of Odonata in Ohio, the author determined that, except for those already very familiar with the state, maps of species distribution would be far more meaningful than lists of counties. Maps have not been provided for species with 3 or fewer county records, nor for those found in all counties, or all but a few counties. County names are listed in the text for those without maps. An appendix is available with a complete listing of counties for all species.

## ACKNOWLEDGMENTS

This paper would not exist without the work of the Ohio Odonata Survey coordinating committee members, listed above. There are also numerous volunteer collectors, who have added new data, including new county or state records. These individuals are too numerous to list here, but new county and state records are credited in another concurrent publication, being prepared by Glotzhober, Restifo, Perry, and Alrutz. I have previously mentioned the financial support for the survey from the Ohio Department of Natural Resources, Division of Wildlife. I would also like to thank Kim Radomsky for help and guidance with the computer work to prepare this paper.

## DISCREDITED SPECIES

Three species previously listed for Ohio are deleted from this list.

*Lanthus vernalis* Carle, 1980. In his description of this species, Carle describes the confusion between this species and *L. parvulus*. Based upon the distribution he gives, it might be a potential species in Ohio. For that reason, the Ohio Odonata Survey included it in their list of species, but there have been no specimens found to date that have been ascribed to this species. Workers should continue to carefully check all *Lanthus* collected against Carle's description.

*Coryphaeschna ingens* (Rambur), 1842. Langlois (1932) reported this species with no county or locale listed. This non-specific report was included

by Borror & Epstein (1942). Both Lawrence (1967) and Restifo (1972) reviewed this report, and considered it a dubious record. It is listed here only for the benefit of those who have not previously noted its exclusion.

*Celithemis martha* Williamson, 1922. This species has not been published for Ohio, but has been carried on the list of species by the Ohio

Odonata Survey. Bob Restifo (personal communication) reported seeing one in the collections of The Ohio State University, but this specimen cannot be found. The only adjacent state with known populations is Pennsylvania. It will be excluded from our list until either the OSU specimen is found and verified or other specimens are collected.

## Index to Ohio Counties



## SPECIES ACCOUNTS

### CALOPTERYGIDAE

*Calopteryx angustipennis* Selys, 1853.

June 10 to 14. There are three published records of this species, all before 1937. The only specimens we have been able to locate are dated 1899 and 1900. The species was reported from two adjacent north-central counties: Ashland and Richland. It appears to have been extirpated. No Map.

*Calopteryx aequabilis* Selys, 1839.

June 8 to August 20. Most Ohio records are from June. We have located 17 sets of specimens from Ohio of this species. Records from the northeastern part of the state are as recent as 1982. The records for Franklin and Fairfield counties date from 1895, and they are certainly gone from these two counties. Obviously it is very rare in the state. Homer Price (1950) commented that "Due to its brief flight season, it may be much more plentiful than is generally believed."

*Calopteryx maculata* (Beauvois), 1805.

May 5 to September 22. From 429 records, 74% are in June and July. Widespread and common along wooded streams. Only five counties without records.

*Hetaerina americana* (Fabricius), 1798.

May 7 to October 21. The peak of 234 records is in August. Common along streams wider than the above species, with sunny patches and emergent vegetation such as water willow (*Justicia americana*). Very common in the cleaner rivers. Nowhere is it as abundant as described by Kellicott in 1895, who described it congregating in the hundreds and reported capturing 75 individuals in one sweep of his net. I believe pollution, while not eliminating this species, has greatly reduced its numbers.

*Hetaerina titia* (Drury), 1773.

August 25 to October 8. Peaks in September. Known in Ohio only from five counties: Brown, Fairfield, Paulding, Scioto, and Williams (most of the records come from Williams). Price (1950) indicated it is common along Fish Creek and the St. Joseph's River in Williams County, but our most recent record is from 1957. We need to search for this species.

No Map.

### LESTIDAE

*Archilestes grandis* (Rambur), 1842.

July 3 to October 21. Widespread in the southeastern two-thirds of the state, but uncommon. This species appears to have invaded Ohio from the southwest. It was first reported in 1927 from Butler County (Oxford, OH., Williamson, 1930) and 1930 in Montgomery County (Cotterman, 1930). By 1943 it was found in central Ohio (Franklin County) and in northeastern Ohio by the 1970s and 80s (Cuyahoga, 1976; Lake, 1980).

### *Archilestes grandis*

First known dates  
by county. 1980



*Lestes inaequalis* Walsh, 1862.

May 22 to August 17. Uncommon.

*Lestes eurinus* Say, 1839.

May 24 to August 11. Uncommon to common in scattered locations.

*Lestes congener* Hagen, 1861.

May 30 to November 1. Uncommon in widely scattered populations.

*Lestes unguiculatus* Hagen, 1861.

May 23 to September 26. Most common June through August. Not common. Distribution mostly in glaciated areas, with the sole exception being Tuscarawas County.

*Lestes forcipatus* Rambur, 1842.

April 28 to September 15. Relatively common in scattered locations.

*Lestes disjunctus disjunctus* Selys, 1862.

June 5 to August 30. Uncommon. One fourth as many records as *L. d. australis*. Populations appear to be scattered, mostly in eastern Ohio, and sometimes in the same locations as the next subspecies. Ohio is an overlap area for this more northern subspecies and the next which is more southern in distribution.

*Lestes disjunctus australis* Walker, 1952.

April 20 to September 14. Common in much of the state.

*Calopteryx aequabilis*



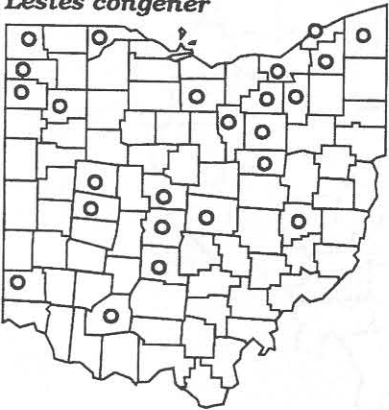
*Calopteryx maculata*



*Hetaerina americana*



*Lestes congener*



*Lestes inaequalis*



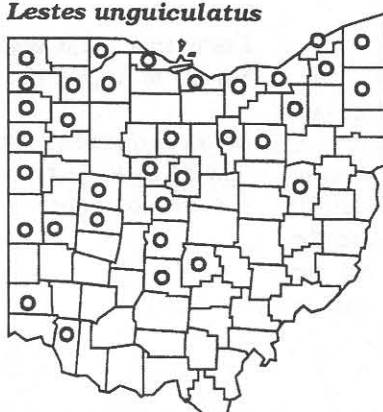
*Lestes eurinus*



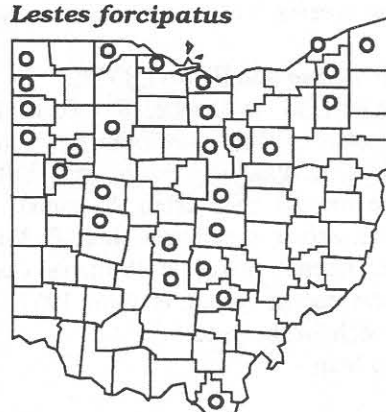
*Lestes dryas*



*Lestes unguiculatus*



*Lestes forcipatus*





*Lestes disjunctus* ssp.

April 21 to October 4. There are published records for this species which date prior to the splitting of it into two subspecies. We have not been able to examine specimens from all such publications, and some are for counties not represented from our data for either of the two subspecies. These counties include: Ashtabula, Columbiana, Mercer, and Ottawa. With the overlapping distribution of the two subspecies, we have no way of knowing which subspecies (or both?) are represented by these dates and county records.

*Lestes rectangularis* Say, 1839.

May 21 to October 28. The peak of distribution is in July. Very common. Reported for every county in Ohio except five: Adams, Brown, Hamilton, Monroe, and Scioto. No Map.

*Lestes dryas* Kirby, 1890.

May 1 to August 16. The peak of the flight period is in June. Uncommon but widespread in northern half to two-thirds of the state.

*Lestes vigilax* Hagen, 1862.

June 16 to September 13. Common in widely

scattered populations in the northern half of Ohio.

**COENAGRIONIDAE**

*Argia apicalis* (Say), 1839.

May 28 to October 1. The peak flight season is July and August, with 72% of 319 records. Very common. Recorded for every county except three: Columbiana, Jefferson, and Morrow. No Map.

*Argia bipunctulata* (Hagen), 1861.

June 3 to September 19. Peak month is July. Since 1930 this species has been recorded for Cedar Bog (now a nature preserve) in Champaign County. In 1991 and 1992 the author found it at two nature preserves in Clark County: Gallagher Fen (Springfield Twp.) and Prairie Road Fen (Moorefield Twp.). All three sites have alkaline fens, and the maximum distance between them is less than ten (10) miles (13 km). While fairly common at these sites, this is a rare species in Ohio due to its limited habitat. No Map.

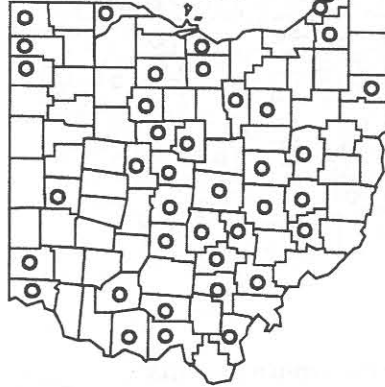
*Argia fumipennis violacea* (Hagen), 1861.

May 26 to September 21. June, July, and August are clear peaks, with 96% of 325 records. Common. Reported in all but six counties.

*Lestes d. disjunctus*



*Lestes d. australis*



*Argia sedula*



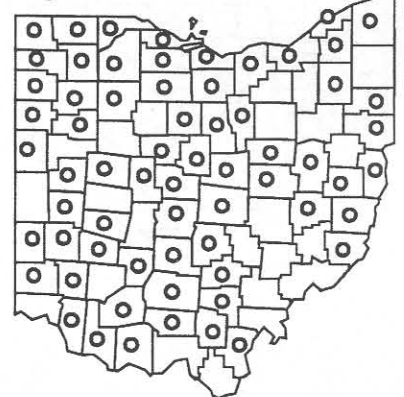
*Lestes vigilax*



*Argia fumipennis violacea*



*Argia moesta*



*Argia moesta* (Hagen), 1861.  
 May 26 to October 1. The peak season is July and August. Very widespread and common along streams.

*Argia sedula* (Hagen), 1861.  
 May 30 to September 26. The peak of the flight season is August. Widespread, but taken only occasionally.

*Argia tibialis* (Rambur), 1842.  
 May 23 to September 27. Most common in June and July. Widespread and fairly common along streams.

*Argia translata* Hagen, 1865.  
 June 30 to September 15. The flight season peaks in July and August. Widespread, but much less common than the previous species.

*Amphiagrion saucium* (Burmeister), 1839.  
 May 8 to August 22. Most adults are found in June, and they are very rare by August. This species is characteristic of bogs, fens, and seeps.

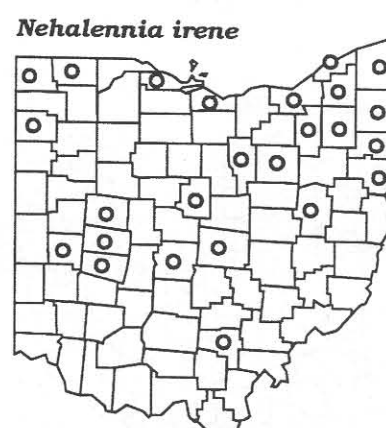
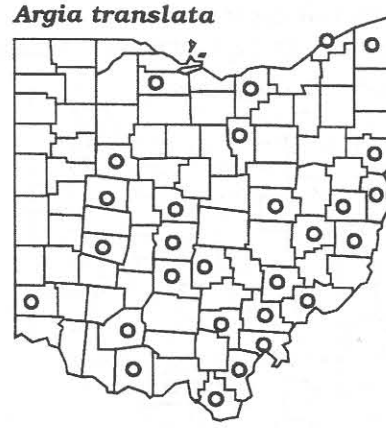
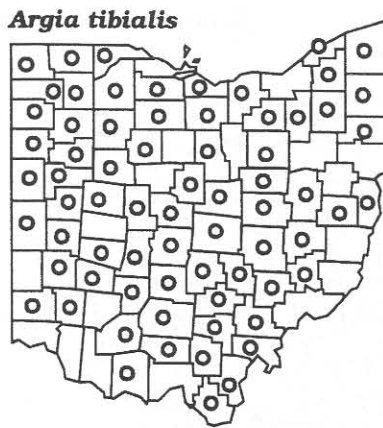
With as much loss of wetlands as Ohio has experienced, it is somewhat surprising how many populations of this species still survive. Common within their restricted habitats.

*Nehalennia gracilis* Morse, 1895.  
 May 30 to August 1. A rare bog inhabitant. The only record I have since 1960 is from 1994 at Triangle Lake Bog Nature Preserve in Portage County. Refer to the map for previous records.

*Nehalennia irene* (Hagen), 1861.  
 May 17 to August 26. The peak flight period is in June. This species is not nearly as rare as the above, but is still very uncommon. Approximately half of 37 records we have are since 1970.

*Chromagrion conditum* (Hagen), 1876.  
 May 5 to July 12. The peak of the flight season is in June, and by July they are already uncommon. Common in widely separated and local situations.

*Coenagrion resolutum* (Hagen), 1876.  
 June 12 to July 17. Very rare. Known only from



four counties, in three widely separated parts of Ohio: Geauga and Trumbull counties in northeast Ohio; Greene County in southwest Ohio; and Paulding County in northwest Ohio. Lines drawn between these three areas make a triangle with two sides about 175 miles long and the third 75 miles long. No Map.

***Enallagma divagans*** Selys, 1876.

May 21 to July 4. The peak of activity is in June. Despite numerous county records, this species is uncommon.

***Enallagma hageni*** (Walsh), 1863.

May 21 to August 6. Half of our 30 records are from June. Uncommon in scattered northern Ohio locations.

***Enallagma boreale*** Selys, 1875.

May 14 to June 29. This northern species is very rare in Ohio. It is known from small ponds, boggy ponds, and bogs in northern counties. I am not sure how to explain the Franklin County records - perhaps these are an artifact of accidental transportation into the county from other areas.

***Enallagma cyathigerum*** (Charpentier), 1840.

May 25 to June 29. Very rare in Ohio. Recorded only for Lake, Lucas, and Williams counties. Some authors suggest it is found only in fish-free waters. Homer Price (1958) noted that "it was first collected (in the state & Williams Co.) in 1949, then consistently ever since." Collecting during the past four years by Dwight Moody and the author at Mud Lake and other sites in Williams County has not produced any records. All recent records are from Holden Arboretum on the Geauga/Lake county line.

No Map.

***Enallagma geminatum*** Kellicott, 1895.

May 14 to September 26. The peak of the flight season is June, July, and August (82% of 126 records). Uncommon to common and widespread.

***Enallagma signatum*** (Hagen), 1861.

May 21 to October 2. The peak flight season is July and August (62% of 135 records). Common and widespread.

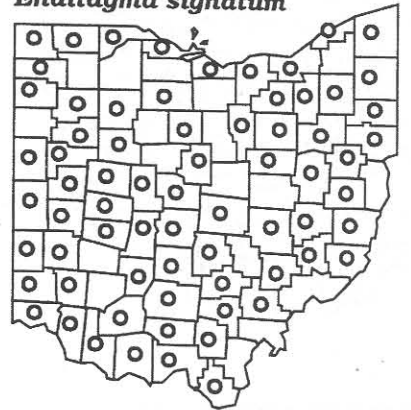
***Enallagma boreale***



***Enallagma geminatum***



***Enallagma signatum***



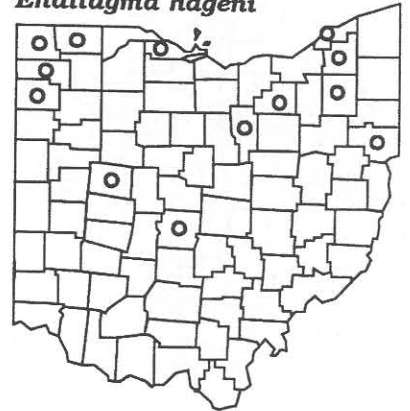
***Enallagma vesperum***



***Enallagma divagans***



***Enallagma hageni***



*Enallagma vesperum* Calvert, 1919.

May 31 to September 18. The peak flight season is June and July. Uncommon to rare, though it may be more common than numbers of records would show, due to its evening flight period.

*Enallagma ebrium* (Hagen), 1861.

May 7 to October 10. The flight season peaks in June and July, with records very rare for September and October. Uncommon to rare.

*Enallagma exsulans* (Hagen), 1861.

May 14 to September 16. The peak of the flight period is in June, July, and August (95% of 251 records). Very common and widespread. Recorded in all but 2 counties: Hamilton and Henry. No Map.

*Enallagma antennatum* (Say), 1839.

May 20 to September 24. Forty-eight percent of our 103 records are from June. Uncommon to common in most of the state, except for the extreme southern counties.

*Enallagma carunculatum* Morse, 1895.

June 3 to September 11. The flight period peaks in July. Uncommon to rare in scattered locations.

*Enallagma doubledayi* (Selys), 1850.

4 May 1897. Two males were collected on the same day by Kellicott in Minerva Park, Columbus (Franklin County). He commented that this was "quite unexpected, as it has not been previously reported from the interiors." We have no other records for this species, and can only assume it was an accidental occurrence.

*Enallagma civile* (Hagen), 1861.

May 4 to October 22. The peak flight period is in July, with most activity between June and September (90% of 330 records). Very common and widespread. Not reported from only 2 counties: Jackson and Seneca. No Map.

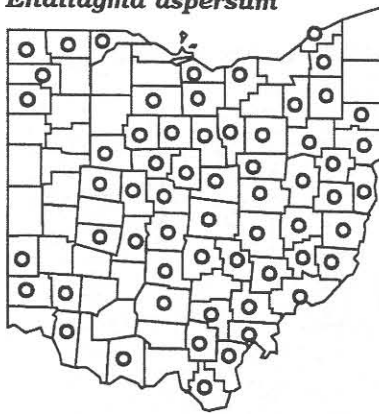
*Enallagma basidens* Calvert, 1902.

May 16 to October 5. Sixty percent of 219 records of adult activity are from July and August, with 94% between June and September. Widespread

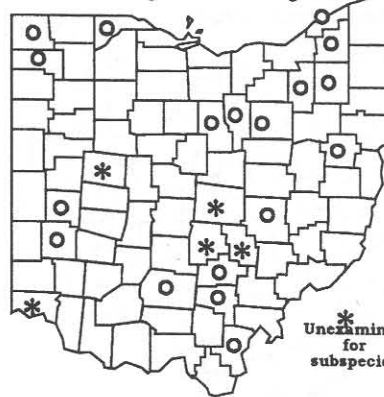
*Enallagma carunculatum*



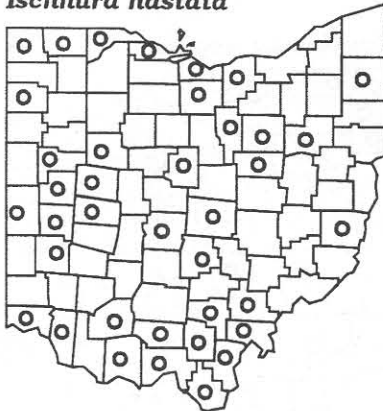
*Enallagma aspersum*



*Enallagma t. westfalli*



*Ischnura hastata*



*Enallagma ebrium*



*Enallagma antennatum*



and common. Not reported from six counties: Ashtabula, Henry, Jefferson, Mahoning, Sandusky, and Wood. This species may have followed a pattern of invasion into Ohio from the southwest, similar to that discussed for *Archilestes grandis*. It was first reported in 1937 in Montgomery and Clermont counties in southwest Ohio (Borrer, 1938). By 1959 it was in most counties along the Ohio River, and in scattered counties as far north as Lake Erie.

***Enallagma basidens***  
**First known dates**  
**by county.**



*Enallagma aspersum* (Hagen), 1861.

May 7 to October 8. The peak flight period is in July, with 95% of 128 records between June and August. Common.

*Enallagma traviatum westfalli* Donnelly, 1964.

June 3 to September 22. The peak flight period is in July. To date, all of the *E. traviatum* which I have examined from Ohio belong to this subspecies (39 records). There are published records which are not specified to subspecies, and which I have not yet been able to examine. These records include several counties that are shown on the map as asterisks.

*Ischnura prognata* (Hagen), 1861.

April 20 to May 25 Borrer (1935) reported one male taken in 1930 by C. H. Kennedy in Crane Hollow, Hocking County on 20 April 1930.

Cruden and Currie (1961) reported that Currie took one male at a pond in the Delaware Wildlife Area, Marion County on 25 May 1959. There are no other records for this species in Ohio. No Map.

*Ischnura posita* (Hagen), 1861.

April 23 to October 11. The peak of the flight season is in July, with 77% of 340 records between June and August. Very widespread and very common. Reported in every Ohio county except four: Hamilton, Harrison, Henry, and Wyandot, where it likely also exists. No Map.

*Ischnura kellicotti* Williamson, 1898.

June 11 to July 3. First reported by Moody, who collected it on 3 July 1992 at Mud Lake Nature Preserve in Williams County. A handful of additional specimens have been taken at that site each year since. Since these rest, defend territories, and oviposit on water lilies, they have only been collected at this site from a boat. They may be present at other ponds, and missed because of this behavior. No Map.

*Ischnura verticalis* (Say), 1839.

April 27 to October 29. The peak flight season is June and July (52% of 754 records), with most specimens collected between May and August (89%). Perhaps Ohio's most common Odonate. Reported in all of the 88 counties. No Map.

*Ischnura (Anomalagrion) hastata* (Say), 1839.

May 6 to October 28. The peak flight period is in July and August. Very widespread, but uncommonly collected.

**AESHNIDAE**

*Gomphaeschna furcillata* (Say), 1839.

June 14-21. New State Record, known only from Geauga County. M. Greene collected 1 female in 1980 adjacent to Lake Kelso (ID confirmed by Restifo and Glotzhober). Several earlier records from T.E. Perry are in the collections of the Cleveland Museum of Natural History. They date from 1980 to 1984, and were taken at Lake Kelso / Fern Lake Bog, and Russell Park.. Due to a collections move, we have been temporarily unable to verify these IDs. Given the matching location, and Perry's reputation, they likely will be verified when we examine them in the near future. No Map.

*Gomphaeschna antilope* (Hagen), 1874.

June 13-25. Very rare. It is known from three counties: Cuyahoga (1 female, 1960), Fairfield (1 male, 1937), and Franklin (1 male, 1895). No Map.

*Basiaeschna janata* (Say), 1839.

May 4 to June 15. A very early darner.

*Boyeria vinosa* (Say), 1839.

June 22 to October 1. A wide-spread stream species.

*Boyeria grafiana* Williamson, 1907.

June 28 to September 10. Known only from Ashtabula, Geauga, and Lake counties. No Map.

*Anax longipes* Hagen, 1861.

June 22 to July 25. This species is wide-spread, but hard to catch. Some people believe it is a wandering species, and I know of no location in Ohio where you can anticipate finding it.

*Anax junius* (Drury), 1778.

April 4 to October 13. Collected in all counties except Columbiana, where it certainly is also. No

Map.

*Nasiaeschna pentacantha* (Rambur), 1842.

June 1 to July 8. This is a strong flier, which is likely under-reported.

*Epiaeschna heros* (Fabricius), 1798.

April 25 to July 30. Wide-spread but uncommon.

*Aeshna mutata* Hagen, 1861.

May 24 to August 29. The flight period is predominantly June, with only two records each in July and August.

*Aeshna umbrosa* Walker, 1908.

June 28 to November 1. Perhaps the most common late summer and early fall aeshnid in most of Ohio. Very widespread.

*Aeshna constricta* Say, 1839.

August 2 to October 28. This common Aeshna is second in frequency only to the above species.

*Aeshna interrupta* Walker, 1908.

There is only 1 record of this species in Ohio, a male collected at Mud Lake in Williams County by

*Anax longipes*



*Nasiaeschna pentacantha*



*Epiaeschna heros*



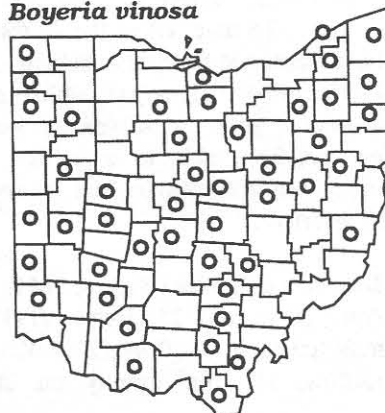
*Aeshna mutata*



*Basiaeschna janata*



*Boyeria vinosa*



Homer Price on 21 September 1951. No Map.

*Aeshna clepsydra* Say, 1839.

August 22 to October 1. Recorded recently only from Mud Lake (now a State Nature Preserve) in Williams County (Price: 4 males & 1 female in 2 visits in 1948; 3 males on 3 visits in 1957). Kellicott (1895) reported specimens taken by Lynds Jones in Oberlin, Lorain County, Ohio. I do not know if this (these) earlier specimen(s) still exist. No Map.

*Aeshna tuberculifera* Walker, 1908.

July 22 to October 8. Only 24 records from the 5 counties shown - and all of these are since 1971, when it was first recorded by Bob Restifo.

*Aeshna canadensis* Walker, 1908.

August 2 to October 5. A northern species which just reaches into northern Ohio counties: Cuyahoga, Defiance, and Williams. No Map.

*Aeshna verticalis* Hagen, 1861.

August 5 to October 6. Most records are from September. Widespread, not uncommon.

**PETALURIDAE**

*Tachopteryx thoreyi* (Hagen), 1858.

May 12 to August 11. Restricted to 15 scattered counties, probably as a result of fragmentation of forests. The larval habitat of this species is in seeps and small streams in wooded areas, with adults flying in sunny openings in or adjacent to woodlands. Ohio changed from 95% forested in 1800 to a low of 12% forested in 1940 and has gradually recovered since then to about 30% forested areas. This species has not re-invaded many areas where it likely lived prior to deforestation.

**GOMPHIDAE**

*Progomphus obscurus* (Rambur), 1842.

May 30 to September 1. Found in extreme northwest and southeast counties. Some authors report they use only sandy bottomed streams.

*Hagenius brevistylus* Selys, 1854.

May 30 to September 1. Found in a dozen scattered counties as shown.

*Ophiogomphus rupinsulensis* (Walsh), 1862.

May 25 to August 22. Scattered in northern half of

*Aeshna tuberculifera*



*Aeshna verticalis*



*Tachopteryx thoreyi*



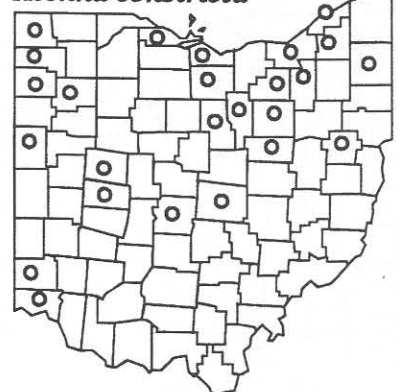
*Progomphus obscurus*



*Aeshna umbrosa*



*Aeshna constricta*



the state.

***Ophiogomphus carolus* Needham, 1897.**

June 6 to 25. Known only from 8 adults collected by Perry (1983) along Swine Creek in Geauga County. This is a clean, swift flowing tributary to the Grand River, averaging 2 to 3 meters wide with a sand, silt, and rock bottom. No Map.

***Erpetogomphus designatus* Hagen, 1858.**

July 29. This species is known from one male collected along the Maumee River in Paulding County in northwestern Ohio (Price 1958), and published records from Hamilton County in extreme southwestern Ohio (Hine, 1913 - no specimen date). No Map.

***Gomphus abbreviatus* Hagen, 1878.**

June 10 to 14. Reported only in Ashland County. Last record from J. Hine, 1913. No Map.

***Gomphus viridifrons* Hine, 1901.**

June 7 to 23. Known only from Adams, Ashland, Coshocton, Franklin, Lake, Logan, and Monroe counties. Until Perry collected one in Lake County in 1977, the last known record was 1929. No Map.

***Gomphus fraternus* (Say), 1839.**

April 26 to August 10. Widely scattered populations.

***Gomphus externus* Hagen, 1858.**

July 16 to August 14. This species is known in Ohio only from 11 males and 2 females collected along the Maumee River in Paulding County in 1947, 1949, 1952, 1953, 1954, and 1957 (See Price, 1950 & 1958). No Map.

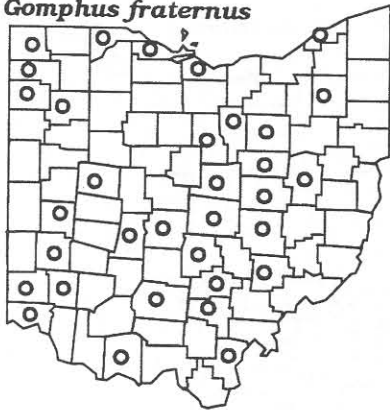
***Gomphus crassus* Hagen, 1878.**

May 23 to July 7. Only specimens since 1939 are from 1984 and 1992 along Big and Little Darby Creeks in Franklin County (author).

***Gomphus vastus* Walsh, 1862.**

May 30 to July 17. Records for this species in Ohio have been scattered, and in some cases in concentrations of activity. Of 68 specimens in our records, most are clustered in two main groups between 1896 to 1903 and 1939 to 1948, with a few other scattered records. Since 1960 there have been only five records: Defiance County in 1980; Lorain County in 1989; Hamilton and Ross

***Gomphus fraternus***



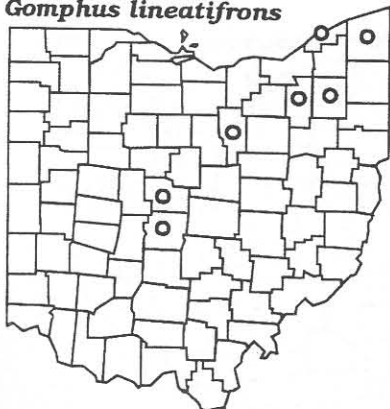
***Gomphus crassus***



***Gomphus vastus***



***Gomphus lineatifrons***



***Hagenius brevistylus***



***Ophiogomphus rupinsulensis***





counties in 1991; and Montgomery County in 1993.

***Gomphus ventricosus*** Walsh, 1863.  
 May 23 to July 12. Known only from Coshocton, Defiance, Franklin, Richland, and Williams counties. Of 37 specimens located, 33 are from Price and before 1960. Only 1 specimen after 1960 - collected by author in 1991 along Big Darby Creek in Franklin County. No Map.

***Gomphus lineatifrons*** Calvert, 1921.  
 June 17 to June 23. All recent records are from northeastern Ohio.

***Gomphus lividus*** Selys, 1854.  
 May 11 to July 14. Wide-spread and abundant.

***Gomphus graslinellus*** Walsh, 1862.  
 May 21 to August 5. Wide-spread and abundant.

***Gomphus exilis*** Selys, 1854  
 May 9 to July 19. Widespread and common, especially at ponds.

***Gomphus spicatus*** Hagen, 1854.  
 May 7 to July 10. Most records are from before 1960, with one record from Brown's Lake Bog in Wayne County on 10 June 1992 by R.Restifo.

***Gomphus quadricolor*** Walsh, 1862.  
 May 23 to June 19. Widely scattered populations that are infrequently collected. A preference has been noted for it to perch on rocks in rapids of large streams.

***Stylurus amnicola*** Walsh, 1862.  
 May 5 to September 4. Known from only 3 counties: Hamilton, Paulding, and Williams. Unconfirmed since 1960 collection by Homer Price. No Map.

***Stylurus notatus*** Rambur, 1842.  
 May 30 and June 1. Ohio State Museum has 8 specimens collected by R.C. Osburn in Lawrence County in 1899 and 3 collected by Homer Price in Williams County in 1946. Possibly extirpated and/or never more than accidental in Ohio. No

***Gomphus lividus***



***Gomphus graslinellus***



***Gomphus exilis***



***Gomphus spicatus***



***Gomphus quadricolor***



***Arigomphus furcifer***



Map.

***Stylurus plagiatus*** Selys, 1854.

May 25 to September 2. Collected in the 1920s by Kennedy; in the 1950s and 1960s by Price, plus two females in 1991 by Eric Eaton on the waterfront of the Ohio River in downtown Cincinnati.

***Stylurus spiniceps*** (Walsh), 1862.

June 27 to October 7. Relatively abundant.

***Stylurus laurae*** Williamson, 1932.

June 17 to September 21. Known for only 3 widely separated Ohio counties: Gallia, Hocking, and Williams. Previously published for only Williams County, where Homer Price collected it between 1945 and 1960. New records are from 1972 in Hocking County by Restifo (personal collection), and from 1993 in Gallia County by Dan Riggs (OHS collections). All Williams County records are from the St. Joseph's River; the Hocking County record is from Clear Creek; the Gallia County record is from Blackfork Swamp. No Map.

***Arigomphus furcifer*** Hagen, 1878.

June 14 to July 8. Most abundant in northern counties, but taken irregularly even there. Only recent collection from 1991 by D. Moody at Lake LaSuAn in Williams County.

***Arigomphus villosipes*** Selys, 1854.

May 10 to July 13. Widespread and abundant. Frequents ponds.

***Dromogomphus spoliatus*** (Hagen), 1858.

June 21 to September 27. Widespread and not uncommon. It is sometimes taken at ponds, but seems to prefer larger streams and rivers.

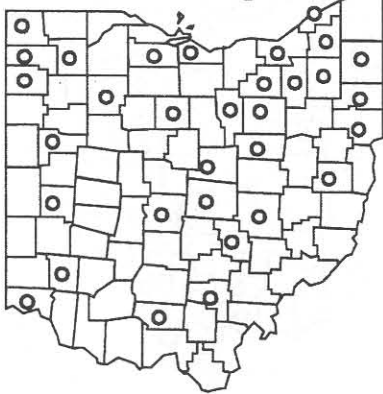
***Dromogomphus spinosus*** Selys, 1854

May 30 to September 13. A wide-spread and fairly common species on or near clean streams and rivers.

***Stylogomphus albistylus*** (Hagen), 1878.

June 3 to July 28. Perhaps more common than our data suggests due to wary behavior.

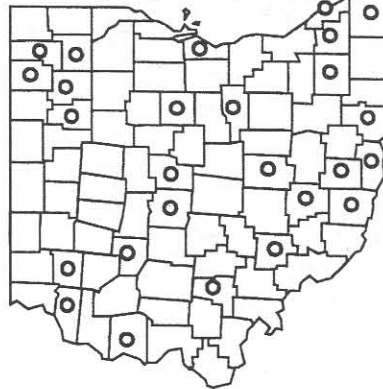
***Arigomphus villosipes***



***Dromogomphus spoliatus***



***Dromogomphus spinosus***



***Stylogomphus albistylus***



***Stylurus plagiatus***



***Stylurus spiniceps***



*Lanthus parvulus* (Selys), 1854.

June 3 to June 10. One female was collected by C. Janus on 10 June 1973 in Cuyahoga County near Bedford (R.A. Restifo Collection). A nymph was reported in 1980 from Tuscarawas County by Balcinas. A female in the OHS collections was collected in 1934 by C.W. Baker near "Waynesburg" -- no county was listed. Towns by this name appear in both Crawford & Stark Counties. No Map.

#### CORDULEGASTRIDAE

*Zoraena diastatops* (Selys), 1868. (Synonym: *Cordulegaster diastatops*).

May 21 to July 10. Many records of this species in Ohio were published before Carle's description of the next species. So far all specimens I have examined from Champaign and Licking counties are *Z. bilineata*. Valid specimens of *Z. diastatops* are found in 5 counties in northeast Ohio (Appendix), but more work is required to ascertain the correct status and distribution of this and the next species in Ohio.

*Zoraena bilineata* Carle, 1983. (Synonym: *Cordulegaster bilineata*).

May 21 to July 12. See notes on the previous species. All 31 specimens I have examined from Champaign County (all from Cedar Bog Nature Preserve) fit Carle's description. I have also collected it at Gallagher Fen Nature Preserve in nearby Clark County. One specimen each from Ross and Licking counties in 1931 also key to this species. No Map.

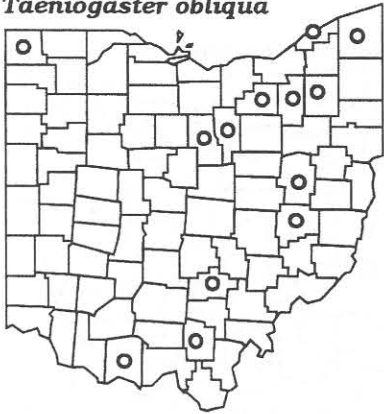
*Cordulegaster erronea* Hagen, 1878.

July 5 to July 30. There are only two published records and three available specimens for this species. Published records are from 1895? (Fairfield County, Kellicott, 1895) and 1931 (Hocking County, Borror, 1937). The three available specimens date 1931 (Hocking - the same specimen as that published in 1937 by Borror), 1939, and 1983 (Fairfield). No Map.

*Taeniogaster obliqua* (Say), 1839. (Synonym: *Cordulegaster obliqua*)

May 22 to July 15. Only scattered records exist.

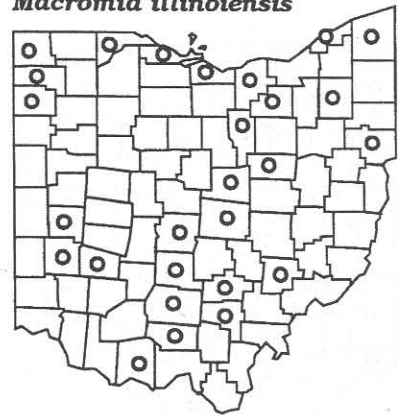
*Taeniogaster obliqua*



*Cordulegaster maculata*



*Macromia illinoiensis*



*Zoraena diastatops*



*Zoraena bilineata*



*Macromia alleghaniensis*



*Cordulegaster maculata* Selys, 1854.  
May 27 to July 23. Recorded irregularly.

**CORDULIIDAE - MACROMIINAE**

*Macromia illinoiensis illinoiensis* Walsh, 1862.  
May 3 to September 19. Our most abundant and widespread *Macromia*.

*Macromia illinoiensis georgina* (Selys, 1878).  
June 21 to August 15. Recently two records of this species taken by Homer Price have come to light: a female taken 21 June 1942 (NMNH, Montgomery Collection), and a male taken 15 August 1956 (OHS). Both were taken along the Auglaize River at Fort Brown in Paulding County. No other records are known. No Map.

*Macromia alleghaniensis* Williamson, 1909.  
July 27 to August 19. Only scattered records exist.

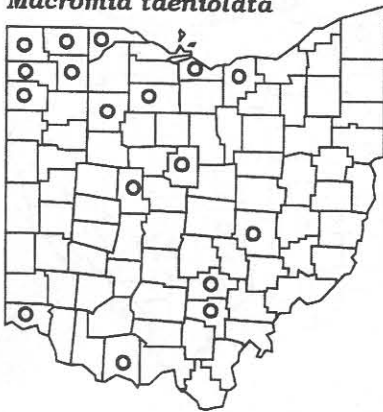
*Macromia taeniolata* Rambur, 1842.  
July 9 to September 15. Locally abundant. Map on next page.

*Macromia wabashensis* Williamson, 1909.  
June 17 to August 19. Carl Cook collected a couple both years during a 1993 - 1994 Ohio survey. The species survives at very low population densities. Cook corrected the ID of a single male (labeled as *M. alleghaniensis*) taken by the author's wife on 19 August 1982 flying over the reservoir at Burr Oak State Park in Morgan County. This find is at the far extreme corner of the state from other known specimens.

*Macromia* sp. undescr.  
22 August 1993. A single male was taken by Mark Dillon along the Stillwater River above the Englewood Dam in Montgomery County. Carl Cook has collected similar specimens in Arkansas and Texas, and is currently preparing a description of this species.  
No Map.

*Macromia pacifica* Hagen, 1861.  
July 16 to August 22. Infrequent records from western portions of the state.

*Macromia taeniolata*



*Macromia wabashensis*



*Macromia pacifica*



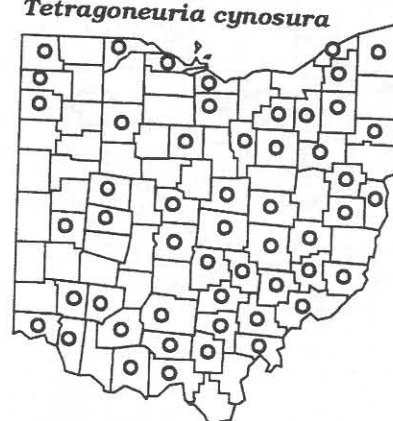
*Didymops transversa*



*Neurocordulia yamaskanensis*



*Tetragoneuria cynosura*



*Didymops transversa* (Say), 1839.  
April 25 to August 21. Ninety percent of the records are from May and June.

**CORDULIIDAE - CORDULIINAE**

*Neurocordulia obsoleta* (Say), 1839.  
June 15 to July 18. This species is known from two specimens from Cincinnati, Hamilton County taken in 1899 and 1900 and two specimens from Ottawa County taken in 1945 and 1950. No Map.

*Neurocordulia yamaskanensis* (Provancher), 1875. June 1 to July 1. Collected irregularly.

*Epitheca (Epicordulia) princeps* Hagen, 1861.  
May 6 to September 31. Rare in flight before June. Statewide and common. Records exist from all counties except: Gallia, Greene, Henry, Mahoning, Mercer, Sandusky, and Trumbull. No Map.

*Epitheca (Tetragoneuria) cynosura* (Say), 1839.  
April 28 to August 10. Widespread and abundant. Like the above species, it is probably only a matter of time before it will be recorded in all counties.

*Epitheca (Tetragoneuria) canis* McLachlan, 1886.  
May 9 to June 11. Known from only 3 locations in two counties: Fern Lake Bog and Big Creek Metro Park in Geauga County, and the Stigwandish Boy Scout Camp in Lake County. No Map.

*Helocordulia uhleri* Selys, 1871.  
May 4 to June 8. From 1968 to 1993 known only from Crane Hollow and Tar Hollow State Park in Hocking County. During 1994 Dan Riggs collected a single specimen along Big Pine Creek several miles upstream from Crane Hollow, and

Mark Dillon collected a specimen on Beasley's Fork Creek in Adams County. No Map.

*Somatochlora linearis* (Hagen), 1861.  
June 28 to September 3. Uncommon.

*Somatochlora ensigera* Martin, 1906.  
June 20 to August 16. Rare. Known only from three extreme northwest counties: Defiance (Carl Cook, 1993), Paulding (H. Price, 1943, 46, 48, and 51), and Williams (H Price, 1949). No Map.

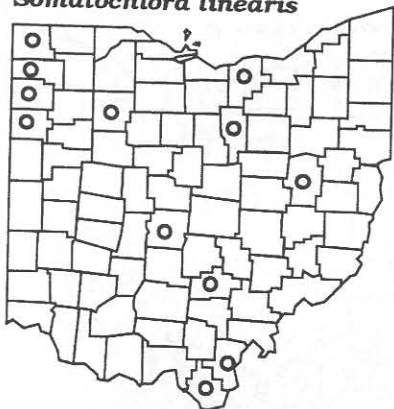
*Somatochlora tenebrosa* (Say), 1839.  
June 30 to September 14. Widespread but uncommon.

*Somatochlora hineana* Williamson, 1931.  
June 7 to July 4. First described from Ohio, this species may be extirpated from the state. The type locality near Indian Lake in Logan County has been virtually destroyed. Homer Price collected 2 specimens in Williams County (1949 & 1956) and numerous specimens along a railroad track in Oak Openings Metro Park, Lucas County (1952 thru 1961). Extensive searches of these habitats by Dwight Moody between 1992 and 1994 (occasional help by the author) revealed none. No Map.

*Somatochlora kennedyi* Walker, 1925.  
July 1, 1955. A single male collected by T.E. Perry along Chapel Creek in Erie/Lorain County. He revisited the site in 1975 and saw none. At that time he considered the habitat equivalent to its prior condition. No subsequent records. No Map.

*Cordulia shurtleffi* Scudder, 1866.  
May 20 to June 6. This evening flying species was known only from Fern Lake Bog in Geauga County, where Robert Cruden collected 2 males

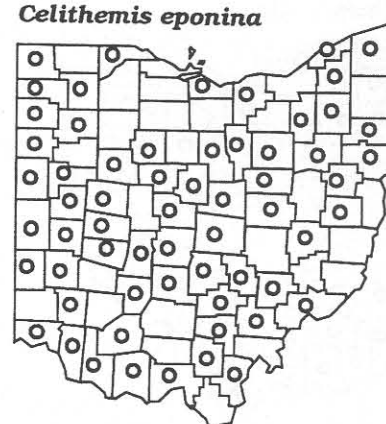
*Somatochlora linearis*



*Somatochlora tenebrosa*



*Celithemis eponina*



patrolling the edge of the bog mat in 1960. In 1994 Mike Greene and the author collected several males near the bog mat at Triangle Lake Bog Nature Preserve in Portage County. The few other remaining kettle bogs in northeastern Ohio need to be searched for this early spring evening species. No Map.

***Dorocordulia libera*** (Selys), 1871.

22 June 1924. Known only from two males taken on this date by J.C. Pallister at Bradley Pond (now Lake Kelso Metro Park) Geauga County. No Map.

**LIBELLULIDAE**

***Nannothemis bella*** (Uhler), 1857.

June 4 to August 14. Known only from Cedar Bog Nature Preserve in Champaign County and Silver Lake in Miami County. Robert Alrutz believes it is now gone from the latter site, which has changed since he collected it there in 1959. The Cedar Bog site is small (approximately 2 hectare), but appears to hold a stable population. No Map.

***Perithemis tenera*** (Say), 1839.

May 30 to September 25. Recorded in all 88 counties. Very common at farm ponds, other small ponds, lakes, and occasionally along streams. No Map.

***Celithemis eponina*** (Drury), 1773.

June 11 to October 8. Widespread and common.

***Celithemis elisa*** (Hagen), 1861.

May 23 to September 26. Common. Found in all but 13 of the 88 counties.

***Celithemis fasciata*** Williamson, 1910. (Formerly recorded as *C. monomelaena*)

June 9 to August 24. Uncommon and in scattered locations.

***Erythrodiplax umbrata*** (Linnaeus), 1758.

Known from only a single male, collected by Borrer at Cedar Swamp (today Cedar Bog Nature Preserve) in Champaign County on 11 June 1934. Certainly this specimen of a far southern species represents an individual accidentally blown far beyond its normal range. See Borrer (1935). No Map.

***Erythrodiplax minuscula*** (Rambur), 1842. (Formerly recorded as *Erythrodiplax connata minuscula*)

Known from only one male collected by Borrer on 23 June 1933 at Lake Alma in Vinton County. See comments above. It may be significant that both these records were during a time well known for drought and unusual heat. No Map.

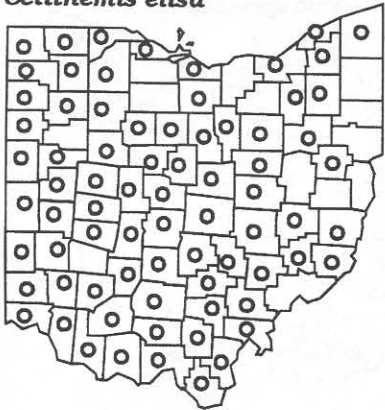
***Libellula deplanata*** Rambur, 1842. (Synonym: *Ladona deplanata*)

May 19. Known from 2 males taken on the same day in 1992 by Chris Morasky at YMCA Camp Kern, above the Little Miami River in Warren County. "Optimus Pond," where they were taken, is a man-made pond downstream from the camp's horsebarns. Parts of the pond are quite eutrophic. Attempts by the author to re-collect this species during 1993 and 1994 were unsuccessful. It is probably an accidental, blown in from nearby Indiana. It might yet turn up in Ohio with breeding populations. No Map.

***Libellula julia*** (Uhler), 1857. (Synonym: *Ladona julia*)

May 10 to June 30. In recent records known only from Mud Lake, Northwest Township, Williams County. Here it is common. There are specimens (Cincinnati Museum of Natural History; Ohio State University, Museum of BioDiversity) from Portage County dated 1898 and 1900; no

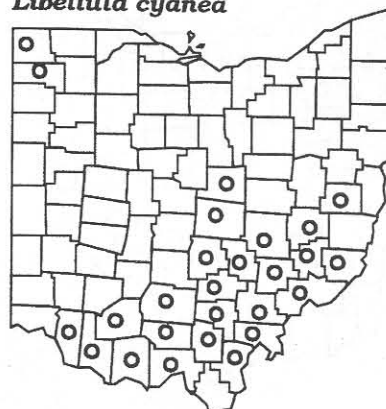
***Celithemis elisa***



***Celithemis fasciata***



***Libellula cyanea***



specimens have been taken later in this county.  
No Map.

***Libellula luctuosa*** Burmeister, 1839.

May 19 to October 17. Recorded from all 88 counties. Of 539 records in our database, 46% are from July, while 91% are from June, July, and August. There are 7 records from May, 41 from September, and 2 from October. No Map.

***Libellula auripennis*** Burmeister, 1839.

June 23 - 24. Very rare, probably an accidental species. Recorded by Kellicott (1895) from Cincinnati in Hamilton County. A specimen from 1964 from Ottawa County on Lake Erie is in the collection of the Cleveland Museum of Natural History. Kellicott (1895) comments: "It must be everywhere rare, I have seen only one in the state." No Map.

***Libellula cyanea*** Fabricius, 1775.

May 20 to September 14. This striking insect has an unusual distribution in Ohio: two extreme northwest counties, and numerous areas of southeast Ohio. It is uncommon to common in the areas shown.

***Libellula semifasciata*** Burmeister, 1839.

April 25 to August 9. Widespread & locally common.

***Libellula pulchella*** Drury, 1770.

May 9 to September 17. Seventy-five percent of the 334 database records are from June and July. This common species has been collected from every Ohio county except Clark and Fayette, where Borror (1937) reported observing the species. No Map.

***Libellula quadrimaculata*** Linnaeus, 1758.

May 15 to July 11. Uncommon. Limited primarily to northern counties.

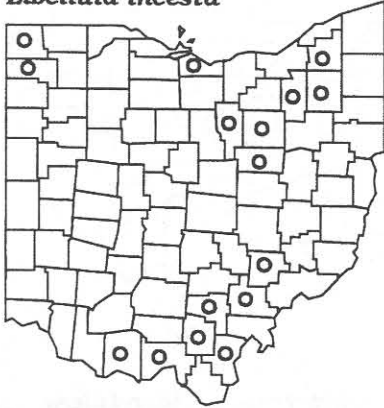
***Libellula incesta*** Hagen, 1861.

June 8 to September 22. Locally common in scattered areas.

***Libellula vibrans*** Fabricius, 1793.

June 6 to September 10. Scattered populations. Harwood (1960) collected it in the limestone areas of northern Ashland County, then observed that since it "has not been found about numerous

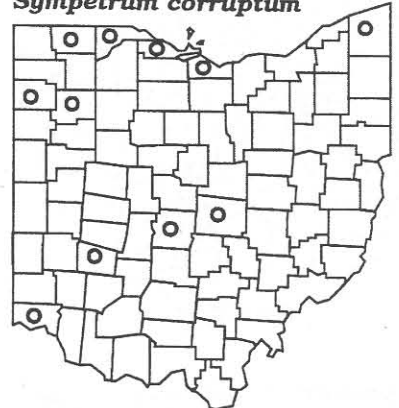
***Libellula incesta***



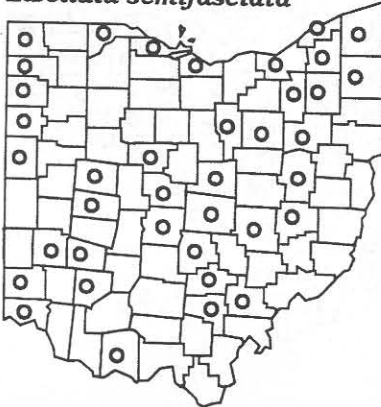
***Libellula vibrans***



***Sympetrum corruptum***



***Libellula semifasciata***



***Libellula quadrimaculata***



***Sympetrum ambiguum***



woodland pools that have been visited in the acid-soil areas of Ashland County, it seems possible that *L. vibrans* prefers calcareous soils." I have not been able to confirm nor refute this observation in Ohio, and T.W. Donnelly (personal communication) advises me that it does not prefer calcareous soils elsewhere.

***Libellula lydia* Drury, 1770. (Synonym: *Plathemis lydia*)**

April 14 to September 24. Their populations peak in abundance in June. Seventy percent of the 470 records are in June and July (only 1 in April and 12 in September). Possibly our most common Odonate. Reported for every county except Adams and Lawrence, where it most likely also exists. By habitat, this "White-tailed Skimmer" prefers small ponds or slow and sunny streams - both rare habitats in Ohio 200 years ago. In heavily forested areas of southern Ohio I have seen it only at beaver ponds - perhaps its natural habitat when the state was 95% forested. Like the white-tailed deer, it is probably much more abundant today than during pioneer times. No Map.

***Sympetrum corruptum* (Hagen) 1861(Synonym: *Tarnetrum corruptum*)**

April 18 to October 13. Most records are from August and September. Widely scattered populations. Homer Price (1958) reported that they were common in only two of the previous 12 years.

***Sympetrum ambiguum* (Rambur), 1842.**

July 1 to October 4. Widespread but uncommon.

***Sympetrum obtrusum* (Hagen), 1867.**

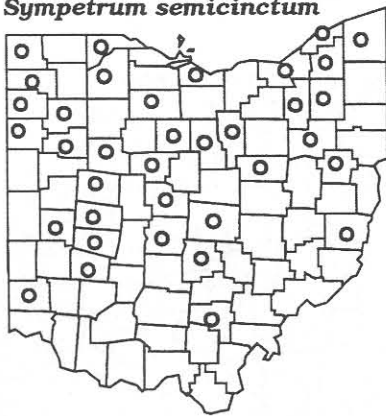
June 22 to October 26. Scattered populations and uncommon.

***Sympetrum internum* Montgomery, 1943.**

June 26 to October 21. Most records from mid-September and October. Very uncommon. Previously reported from Williams, Paulding, and Putnam counties, recent additions from Lucas (1992) and Scioto (unpublished 1897 record from J.S. Hine).

No Map.

***Sympetrum semicinctum***



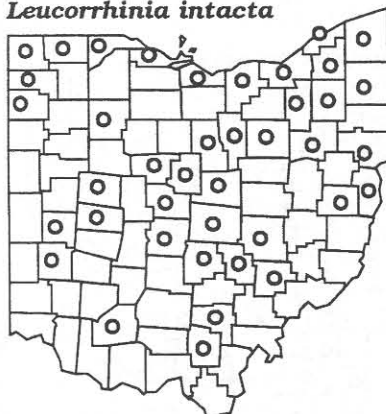
***Sympetrum vicinum***



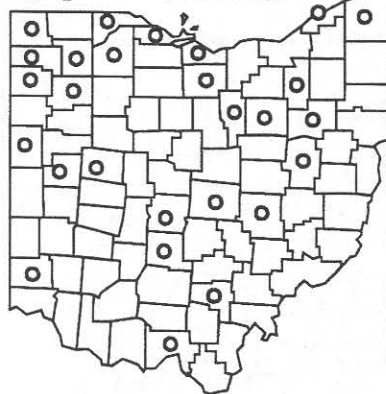
***Sympetrum costiferum***



***Leucorrhinia intacta***



***Sympetrum obtrusum***



***Sympetrum rubicundulum***





*Sympetrum rubicundulum* (Say), 1839.

May 5 to October 15. 69% of 434 records are from July and August. Our most common *Sympetrum*, with it unreported from only 9 counties.

*Sympetrum semicinctum* (Say), 1839.

June 28 to October 5. Fairly common.

*Sympetrum vicinum* (Hagen), 1861.

June 20 to November 18. Peak of population is during September, with 85% of 317 records from August, September, and October. Common.

*Sympetrum costiferum* (Hagen), 1861.

July 12 to November 2. Peak in October. Very rare. One old record from Franklin County (Kellicott, 1895) and one more recent record from Knox County (Alrutz, 1957).

*Leucorrhinia intacta* Hagen, 1861.

April 29 to August 1. Peak in June. Only one record each for April and August. Widespread but local, scattered populations. Usually common where present.

*Leucorrhinia frigida* Hagen, 1890.

June 22 to July 8. Previously known from only 2 males, one each in 1923 and 1924, and both from "Bradley's Pond" (now Lake Kelso) in Burton Township of Geauga County (Perry, 1975b). Perry revisited this site three times in 1974 and found none. The author visited this site with similar success in 1994. Mike Greene of the Akron Metro Parks collected several specimens later in 1994 at Triangle Lake Bog in Portage County, and these were identified by the author. No Map.

*Pachydiplax longipennis* (Burmeister), 1839.

May 6 to September 23. Peak in July, 92% of 604 records are from June, July, and August. Found in all 88 counties of Ohio. Common. No Map.

*Erythemis simplicicollis* Say, 1839.

May 4 to October 18. Peak in July, 88% of 506 records are from June, July, and August. Found in all 88 counties of Ohio. Common. No Map.

*Pantala hymenaea* (Say), 1839.

April 3 to September 19. Very rare in April and

*Tramea lacerata*



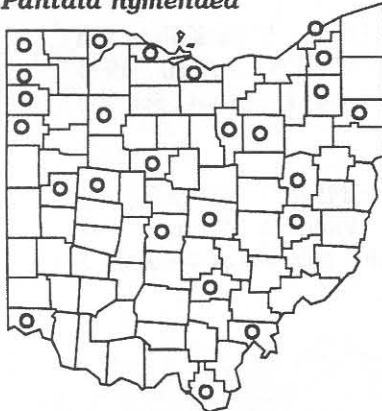
*Tramea onusta*



*Tramea carolina*



*Pantala hymenaea*



*Pantala flavescens*



May, with peak in July and August. A widespread but very uncommon species that travels great distances. Both *Pantala* species would be more reported, except they are very difficult to catch.

*Pantala flavescens* (Fabricius), 1798.  
June 24 to October 17. Widespread, but uncommon to rare. See notes above.

*Tramea lacerata* Hagen, 1861.  
May 6 to October 11. Two-thirds of our records are from June and July. Widespread and common.

Our most common *Tramea*. Found in all but 7 of the 88 counties, and are probably found in those also.

*Tramea onusta* Hagen, 1861.  
May 7 to October 5. Widely scattered and uncommon.

*Tramea carolina* (Linnaeus), 1763.  
May 6 to September 14. Scattered and uncommon.

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## APPENDIX

### The Odonata of Ohio: List of Counties for each Species

- Calopteryx angustipennis*: Ashland, Richland.
- Calopteryx aequabilis*: Fairfield, Franklin, Geauga, Portage, Summit, Williams.
- Calopteryx maculata*: (all counties except: Henry, Mercer, Ottawa, Scioto, Wood.)
- Hetaerina americana*: Allen, Ashland, Auglaize, Belmont, Brown, Butler, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Greene, Henry, Highland, Hocking, Huron, Knox, Lake, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Medina, Mercer, Miami, Montgomery, Morgan, Morrow, Paulding, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Summit, Union, Warren, Wayne, Williams, Wood.
- Hetaerina titia*: Brown, Fairfield, Paulding, Scioto, Williams.
- Archilestes grandis*: Ashland, Athens, Butler, Clinton, Cuyahoga, Franklin, Hamilton, Jackson, Lake, Licking, Marion, Montgomery, Morgan, Morrow, Muskingum, Preble, Tuscarawas.
- Lestes inaequalis*: Ashland, Ashtabula, Champaign, Cuyahoga, Defiance, Erie, Fairfield, Geauga, Holmes, Jackson, Knox, Lake, Licking, Logan, Morrow, Ottawa, Perry, Portage, Richland, Stark, Summit, Trumbull, Vinton, Wayne, Williams.
- Lestes eurinus*: Ashland, Athens, Delaware, Erie, Franklin, Geauga, Lake, Logan, Lucas, Morgan, Paulding, Portage, Summit, Williams.
- Lestes congener*: Ashland, Ashtabula, Butler, Champaign, Cuyahoga, Defiance, Delaware, Franklin, Geauga, Guernsey, Highland, Holmes, Huron, Lake, Licking, Logan, Lucas, Medina, Paulding, Pickaway, Putnam, Summit, Wayne, Williams.
- Lestes unguiculatus*: Ashland, Ashtabula, Butler, Champaign, Clermont, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Franklin, Geauga, Henry, Lake, Logan, Lorain, Lucas, Marion, Mercer, Miami, Morrow, Ottawa, Paulding, Pickaway, Putnam, Summit, Trumbull, Tuscarawas, Van Wert, Wayne, Williams, Wood.
- Lestes forcipatus*: Allen, Ashland, Ashtabula, Auglaize, Champaign, Defiance, Erie, Fairfield, Franklin, Geauga, Hancock, Hocking, Huron, Knox, Lake, Lawrence, Licking, Logan, Lucas, Ottawa, Paulding, Pickaway, Portage, Richland, Van Wert, Wayne, Williams.
- Lestes disjunctus disjunctus*: Ashland, Athens, Cuyahoga, Franklin, Geauga, Lake, Pickaway, Vinton.
- Lestes disjunctus australis*: Adams, Ashland, Athens, Butler, Coshocton, Defiance, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Guernsey, Hamilton, Highland, Hocking, Huron, Lake, Licking, Lucas, Mahoning, Marion, Miami, Morrow, Muskingum, Noble, Paulding, Perry, Pickaway, Pike, Scioto, Seneca, Tuscarawas, Union, Vinton, Wayne, Williams, Wyandot.
- Lestes disjunctus* spp. Ashtabula, Columbiana, Defiance, Mercer, Ottawa, Paulding.
- Lestes rectangularis*: (all counties except: Adams, Brown, Hamilton, Monroe, Scioto.)
- Lestes dryas*: Ashland, Ashtabula, Champaign, Columbiana, Coshocton, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Fulton, Geauga, Hancock, Huron, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Mercer, Morrow, Ottawa, Paulding, Pickaway, Portage, Shelby, Summit, Trumbull, Wayne, Williams.
- Lestes vigilax*: Ashland, Carroll, Darke, Defiance, Erie, Geauga, Holmes, Knox, Lake, Licking, Mahoning, Miami, Montgomery, Ottawa, Portage, Summit, Trumbull, Williams.
- Argia apicalis*: (all counties except: Columbiana, Jefferson, Morrow.)
- Argia bipunctulata*: Champaign, Clark.
- Argia fumipennis violacea*: (all counties except: Coshocton, Lucas, Marion, Mercer, Putnam, Wyandot.)
- Argia moesta*: Adams, Allen, Ashland, Ashtabula, Belmont, Brown, Butler, Clark, Clermont, Columbiana, Coshocton, Crawford, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Geauga, Greene, Guernsey, Hancock, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Marion, Medina, Mercer, Miami, Monroe, Montgomery, Morrow, Ottawa, Paulding, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Seneca, Shelby, Tuscarawas, Union, Van Wert, Vinton, Warren, Williams, Wood.
- Argia sedula*: Adams, Allen, Ashland, Athens, Auglaize, Brown, Champaign, Clermont, Clinton, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Greene, Hardin, Harrison, Highland, Hocking, Huron, Knox, Lake, Licking, Madison, Montgomery, Morgan, Morrow, Muskingum, Paulding, Pickaway, Preble, Putnam, Ross, Sandusky, Seneca, Shelby, Union, Van Wert, Warren, Washington, Williams.
- Argia tibialis*: Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Butler, Clark, Coshocton, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Geauga, Greene, Guernsey, Hancock, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Medina, Meigs, Mercer, Miami, Montgomery, Morgan, Morrow, Muskingum, Noble, Paulding, Perry, Pickaway, Pike, Portage, Putnam, Richland, Ross, Sandusky, Seneca, Shelby, Summit, Trumbull, Tuscarawas, Union, Van Wert, Vinton, Warren, Wayne, Williams, Wood, Wyandot.
- Argia translata*: Adams, Ashland, Ashtabula, Athens, Belmont, Butler, Clark, Columbiana, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hardin, Harrison, Highland, Jefferson, Lake, Lawrence, Logan, Lorain, Meigs, Morgan, Pickaway, Sandusky, Vinton, Washington.
- Amphiagrion saucium*: Ashland, Ashtabula, Athens, Butler, Carroll, Champaign, Clark, Columbiana, Coshocton, Cuyahoga, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Greene, Hocking, Holmes, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Medina, Miami, Montgomery, Morgan, Morrow, Muskingum, Noble, Pickaway, Pike, Portage, Richland, Ross, Sandusky, Summit, Trumbull, Wayne, Williams.
- Nehalennia gracilis*: Champaign, Geauga, Knox, Licking, Portage, Summit, Wayne, Williams.
- Nehalennia irene*: Ashland, Ashtabula, Champaign, Clark, Columbiana, Cuyahoga, Erie, Franklin, Fulton, Geauga, Lake, Licking, Logan, Mahoning, Miami, Morrow, Ottawa, Paulding, Portage, Summit, Trumbull, Tuscarawas, Vinton, Wayne, Williams.
- Chromagrion conditum*: Ashland, Ashtabula, Champaign, Clark, Columbiana, Cuyahoga, Delaware, Fairfield, Franklin, Fulton, Gallia, Geauga, Greene, Hocking, Huron, Knox, Lake, Licking, Lucas, Madison, Mahoning, Medina, Monroe, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pike, Portage, Ross, Summit, Trumbull, Tuscarawas, Vinton, Williams.
- Coenagrion resolutum*: Geauga, Greene, Paulding, Trumbull.
- Enallagma divagans*: Ashland, Ashtabula, Clinton, Columbiana, Delaware, Fairfield, Geauga, Greene, Guernsey, Hocking, Jackson, Logan, Morrow, Perry, Pike, Portage, Richland, Ross, Scioto, Trumbull, Vinton, Washington, Williams.
- Enallagma hageni*: Ashland, Columbiana, Defiance, Franklin, Fulton, Geauga, Lake, Logan, Medina, Ottawa, Paulding, Portage, Williams.
- Enallagma boreale*: Defiance, Erie, Franklin, Geauga, Lake, Lucas, Williams.

- Enallagma cyathigerum*: Lake, Lucas, Williams.
- Enallagma geminatum*: Allen, Ashland, Ashtabula, Athens, Auglaize, Brown, Butler, Carroll, Champaign, Clark, Clermont, Columbiana, Coshocton, Crawford, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Greene, Hamilton, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Lake, Licking, Logan, Lucas, Mahoning, Marion, Medina, Meigs, Mercer, Montgomery, Morgan, Morrow, Muskingum, Perry, Pike, Portage, Preble, Putnam, Richland, Ross, Scioto, Seneca, Stark, Summit, Trumbull, Tuscarawas, Union, Vinton, Warren, Washington, Wayne, Williams, Wyandot.
- Enallagma signatum*: Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Columbiana, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Guernsey, Hamilton, Hancock, Hardin, Harrison, Highland, Hocking, Holmes, Jackson, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Medina, Mercer, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Pickaway, Pike, Portage, Preble, Putnam, Ross, Scioto, Seneca, Shelby, Stark, Summit, Trumbull, Tuscarawas, Union, Vinton, Warren, Wayne, Williams.
- Enallagma vesperum*: Ashland, Ashtabula, Champaign, Defiance, Erie, Fairfield, Geauga, Greene, Lake, Lawrence, Licking, Logan, Montgomery, Ottawa, Pike, Portage, Richland, Stark, Summit, Vinton, Williams.
- Enallagma ebrium*: Ashland, Ashtabula, Athens, Defiance, Erie, Franklin, Geauga, Henry, Lake, Logan, Lucas, Ottawa, Paulding, Portage, Sandusky, Summit, Union, Williams.
- Enallagma exsulans*: (all counties except: Hamilton, Hardin.)
- Enallagma antennatum*: Allen, Ashland, Ashtabula, Auglaize, Belmont, Carroll, Champaign, Clark, Clinton, Columbiana, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Greene, Hancock, Henry, Jefferson, Knox, Lake, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Medina, Mercer, Montgomery, Morrow, Muskingum, Noble, Paulding, Perry, Pike, Portage, Putnam, Richland, Ross, Sandusky, Seneca, Shelby, Stark, Trumbull, Tuscarawas, Union, Van Wert, Wayne, Williams.
- Enallagma carunculatum*: Ashtabula, Auglaize, Carroll, Champaign, Clark, Columbiana, Darke, Erie, Franklin, Fulton, Geauga, Hamilton, Harrison, Holmes, Lake, Licking, Logan, Lucas, Medina, Mercer, Miami, Ottawa, Portage, Stark, Summit, Wayne.
- Enallagma doubledayi*: Franklin.
- Enallagma civile*: (all counties except: Jackson, Seneca.)
- Enallagma basidens*: (all counties except: Ashtabula, Henry, Jefferson, Mahoning, Sandusky, Wood.)
- Enallagma aspersum*: Adams, Ashland, Athens, Belmont, Butler, Carroll, Clark, Clermont, Columbiana, Coshocton, Crawford, Defiance, Delaware, Erie, Fairfield, Franklin, Fulton, Gallia, Geauga, Guernsey, Hardin, Harrison, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Meigs, Monroe, Morgan, Morrow, Muskingum, Noble, Paulding, Perry, Pickaway, Portage, Preble, Richland, Ross, Seneca, Stark, Summit, Tuscarawas, Union, Vinton, Warren, Washington, Wayne, Williams, Wyandot.
- Enallagma traviatum westfalli*: Ashland, Carroll, Defiance, Gallia, Geauga, Hocking, Lake, Lucas, Miami, Montgomery, Muskingum, Portage, Richland, Ross, Summit, Vinton, Wayne, Williams. (plus records not yet determined to subspecies from 5 counties: Fairfield, Hamilton, Licking, Logan, Perry.)
- Ischnura prognata*: Hocking, Marion.
- Ischnura posita*: (all counties except: Hamilton, Harrison, Henry, and Wyandot.)
- Ischnura kellicotti*: Williams.
- Ischnura verticalis*: (all 88 counties.)
- Ischnura hastata*: Adams, Ashland, Athens, Auglaize, Belmont, Champaign, Clermont, Darke, Erie, Fairfield, Franklin, Fulton, Gallia, Hamilton, Hardin, Highland, Holmes, Huron, Jackson, Lawrence, Licking, Logan, Lorain, Lucas, Meigs, Miami, Montgomery, Morrow, Ottawa, Paulding, Pike, Scioto, Shelby, Stark, Trumbull, Vinton, Wayne, Williams.
- Gomphaeschna furcillata*: Geauga.
- Gomphaeschna antilope*: Cuyahoga, Fairfield, Franklin.
- Basiaeschna janata*: Adams, Ashland, Ashtabula, Belmont, Columbiana, Delaware, Fairfield, Franklin, Fulton, Geauga, Greene, Hamilton, Hocking, Lake, Licking, Meigs, Monroe, Morgan, Morrow, Muskingum, Noble, Portage, Richland, Summit, Trumbull, Tuscarawas, Vinton, Washington, Wayne, Williams.
- Boyeria vinosa*: Adams, Ashland, Ashtabula, Auglaize, Belmont, Butler, Carroll, Champaign, Clinton, Coshocton, Crawford, Darke, Defiance, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Greene, Highland, Hocking, Holmes, Huron, Jackson, Knox, Lake, Lawrence, Licking, Logan, Madison, Mahoning, Miami, Morrow, Paulding, Perry, Portage, Preble, Putnam, Seneca, Stark, Summit, Trumbull, Tuscarawas, Vinton, Williams.
- Boyeria graefiana*: Ashtabula, Geauga, Lake.
- Anax longipes*: Erie, Hamilton, Jefferson, Lake, Licking, Ottawa, Paulding, Stark, Vinton.
- Anax junius*: (all counties except: Columbiana.)
- Nasiaeschna pentacantha*: Ashtabula, Defiance, Fairfield, Geauga, Hancock, Paulding, Pickaway, Portage, Putnam, Trumbull, Williams.
- Epiaschna heros*: Adams, Ashland, Athens, Auglaize, Butler, Defiance, Erie, Fairfield, Franklin, Geauga, Hamilton, Hocking, Knox, Lake, Licking, Lorain, Marion, Miami, Ottawa, Paulding, Portage, Richland, Shelby, Summit, Vinton, Wayne, Williams.
- Aeshna mutata*: Ashland, Franklin, Lake, Ottawa, Portage, Stark, Tuscarawas, Wayne, Williams.
- Aeshna umbrosa*: Allen, Ashland, Ashtabula, Auglaize, Butler, Carroll, Champaign, Columbiana, Coshocton, Crawford, Cuyahoga, Defiance, Fairfield, Franklin, Fulton, Geauga, Hamilton, Knox, Lake, Licking, Logan, Lucas, Madison, Mahoning, Medina, Miami, Paulding, Pickaway, Portage, Richland, Ross, Shelby, Stark, Summit, Trumbull, Tuscarawas, Vinton, Williams.
- Aeshna constricta*: Ashland, Butler, Carroll, Champaign, Cuyahoga, Defiance, Erie, Franklin, Geauga, Hamilton, Holmes, Huron, Lake, Licking, Logan, Medina, Mercer, Ottawa, Paulding, Putnam, Richland, Summit, Trumbull, Wayne, Williams.
- Aeshna interrupta*: Williams.
- Aeshna clepsydra*: Lorain, Williams.
- Aeshna tuberculifera*: Geauga, Lake, Ottawa, Vinton, Williams.
- Aeshna canadensis*: Cuyahoga, Defiance, Williams.
- Aeshna verticalis*: Ashland, Cuyahoga, Erie, Franklin, Geauga, Lake, Medina, Mercer, Paulding, Stark, Summit, Vinton, Williams.
- Tachopteryx thoreyi*: Adams, Ashland, Champaign, Clinton, Cuyahoga, Fairfield, Gallia, Greene, Guernsey, Highland, Hocking, Lake, Licking, Perry, Summit.
- Progomphus obscurus*: Athens, Defiance, Gallia, Hocking, Lawrence, Paulding, Pike, Vinton, Williams.
- Hagenius brevistylus*: Adams, Ashland, Ashtabula, Defiance, Franklin, Hocking, Holmes, Lake, Lucas, Monroe, Paulding, Trumbull, Vinton, Wayne, Williams.
- Ophiogomphus rupinsulensis*: Ashtabula, Coshocton, Delaware, Franklin, Geauga, Holmes, Knox, Lake, Medina, Portage, Williams.
- Ophiogomphus carolus*: Geauga.
- Erpetogomphus designatus*: Hamilton, Paulding.
- Gomphus abbreviatus*: Ashland.
- Gomphus viridifrons*: Adams, Ashland, Coshocton, Franklin, Lake, Logan, Monroe.

- Gomphus fraternus*: Adams, Ashland, Butler, Coshocton, Defiance, Erie, Fairfield, Franklin, Gallia, Hamilton, Hocking, Holmes, Knox, Lake, Licking, Logan, Lucas, Madison, Miami, Montgomery, Morgan, Muskingum, Ottawa, Paulding, Portage, Putnam, Richland, Ross, Tuscarawas, Vinton, Warren, Wayne, Williams.
- Gomphus externus*: Paulding.
- Gomphus crassus*: Defiance, Delaware, Erie, Franklin, Madison, Morgan.
- Gomphus vastus*: Ashland, Coshocton, Defiance, Erie, Franklin, Hamilton, Holmes, Knox, Lorain, *Gomphus ventricosus*: Coshocton, Defiance, Franklin, Richland, Williams.
- Gomphus lineatifrons*: Ashland, Ashtabula, Delaware, Franklin, Lake, Portage, Summit.
- Gomphus lividus*: Adams, Ashland, Ashtabula, Athens, Auglaize, Butler, Columbiana, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Greene, Highland, Hocking, Holmes, Jackson, Knox, Lawrence, Licking, Lucas, Madison, Medina, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Pike, Portage, Richland, Sandusky, Stark, Summit, Trumbull, Tuscarawas, Union, Vinton, Wayne, Williams, Wyandot.
- Gomphus graslinellus*: Allen, Ashland, Auglaize, Champaign, Defiance, Delaware, Franklin, Fulton, Greene, Hocking, Jackson, Licking, Logan, Lucas, Marion, Mercer, Montgomery, Paulding, Preble, Richland, Stark, Union, Van Wert, Vinton, Warren, Williams.
- Gomphus exilis*: Ashland, Ashtabula, Athens, Carroll, Columbiana, Coshocton, Erie, Fairfield, Franklin, Fulton, Geauga, Harrison, Hocking, Holmes, Jackson, Jefferson, Lake, Logan, Medina, Meigs, Miami, Morgan, Muskingum, Noble, Perry, Pike, Portage, Ross, Scioto, Stark, Summit, Trumbull, Vinton, Washington, Wayne, Williams.
- Gomphus spicatus*: Ashland, Cuyahoga, Defiance, Erie, Franklin, Holmes, Logan, Portage, Richland, Summit, Wayne, Williams.
- Gomphus quadricolor*: Ashland, Ashtabula, Athens, Coshocton, Franklin, Geauga, Lake, Portage, Trumbull, Tuscarawas, Williams.
- Stylurus amnicola*: Hamilton, Paulding, Williams. Montgomery, Ottawa, Paulding, Ross, Sandusky, Seneca.
- Stylurus notatus*: Lawrence, Williams.
- Stylurus plagiatus*: Erie, Fulton, Hamilton, Ottawa, Paulding, Sandusky, Williams.
- Stylurus spiniceps*: Ashland, Ashtabula, Fairfield, Hocking, Miami, Montgomery, Muskingum, Ottawa, Paulding, Shelby, Summit, Williams.
- Stylurus laurae*: Gallia, Hocking, Williams.
- Arigomphus furcifer*: Defiance, Erie, Fairfield, Licking, Portage, Williams.
- Arigomphus villosipes*: Ashland, Auglaize, Columbiana, Crawford, Cuyahoga, Erie, Franklin, Geauga, Hamilton, Hancock, Harrison, Holmes, Knox, Lake, Licking, Mahoning, Medina, Miami, Muskingum, Paulding, Perry, Pike, Portage, Sandusky, Summit, Trumbull, Vinton, Warren, Wayne, Williams.
- Dromogomphus spoliatus*: Adams, Allen, Auglaize, Defiance, Erie, Fulton, Hamilton, Hancock, Henry, Lake, Lorain, Lucas, Montgomery, Paulding, Preble, Sandusky, Shelby, Union, Williams.
- Dromogomphus spinosus*: Adams, Ashland, Ashtabula, Belmont, Clermont, Columbiana, Coshocton, Crawford, Defiance, Delaware, Erie, Fayette, Franklin, Geauga, Guernsey, Harrison, Henry, Jefferson, Lake, Lorain, Morgan, Paulding, Portage, Putnam, Vinton, Warren.
- Stylogomphus albistylus*: Ashland, Ashtabula, Columbiana, Delaware, Franklin, Geauga, Jefferson, Lake, Licking, Tuscarawas.
- Lanthus parvulus*: Cuyahoga, Tuscarawas.
- Zoraena diastatops*: Ashland, Geauga, Medina, Portage, Summit.
- Zoraena bilineata*: Champaign, Clark, Licking, Ross.
- Cordulegaster erronea*: Fairfield, Hocking.
- Taenioaster obliqua*: Adams, Ashland, Ashtabula, Guernsey, Hocking, Jackson, Lake, Medina, Portage, Richland, Summit, Tuscarawas, Williams.
- Cordulegaster maculata*: Ashland, Fairfield, Geauga, Hocking, Lake, Morgan, Portage, Tuscarawas, Warren.
- Macromia illinoensis illinoensis*: Adams, Ashland, Ashtabula, Columbiana, Defiance, Erie, Franklin, Greene, Hocking, Holmes, Knox, Lake, Licking, Lorain, Lucas, Medina, Miami, Montgomery, Morgan, Ottawa, Paulding, Pickaway, Pike, Portage, Ross, Vinton, Williams.
- Macromia illinoensis georgina* Paulding
- Macromia alleghaniensis*: Adams, Franklin, Ottawa, Scioto.
- Macromia taeniolata*: Adams, Defiance, Erie, Fulton, Hamilton, Hancock, Henry, Hocking, Lorain, Lucas, Morrow, Muskingum, Paulding, Seneca, Union, Vinton, Williams.
- Macromia wabashensis*: Defiance, Morgan, Paulding.
- Macromia sp. undescr.*: Montgomery.
- Macromia pacifica*: Butler, Logan, Miami, Montgomery, Paulding.
- Didymops transversa*: Adams, Ashtabula, Columbiana, Fairfield, Franklin, Hocking, Jefferson, Lake, Medina, Monroe, Ross, Vinton, Washington.
- Neurocordulia obsoleta*: Hamilton, Ottawa.
- Neurocordulia yamaskanensis*: Erie, Lorain, Ottawa, Scioto, Tuscarawas.
- Epiheca (Epicordulia) princeps*: Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Guernsey, Hamilton, Hancock, Hardin, Harrison, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Marion, Medina, Meigs, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Scioto, Seneca, Shelby, Stark, Summit, Tuscarawas, Union, Van Wert, Vinton, Warren, Washington, Wayne, Williams, Wood, Wyandot.
- Epiheca (Tetragoneuria) cynosura*: Adams, Ashland, Ashtabula, Athens, Carroll, Champaign, Clermont, Clinton, Coshocton, Crawford, Defiance, Delaware, Erie, Fairfield, Franklin, Geauga, Guernsey, Hamilton, Hancock, Harrison, Highland, Hocking, Huron, Jackson, Jefferson, Knox, Lake, Licking, Logan, Lucas, Mahoning, Medina, Meigs, Miami, Monroe, Morgan, Muskingum, Noble, Ottawa, Paulding, Perry, Pike, Portage, Ross, Scioto, Stark, Summit, Vinton, Warren, Washington, Wayne, Williams.
- Epiheca (Tetragoneuria) canis*: Geauga, Lake.
- Helocordulia uhleri*: Adams, Hocking.
- Somatochlora linearis*: Ashland, Defiance, Franklin, Gallia, Hancock, Hocking, Lawrence, Lorain, Paulding, Tuscarawas, Van Wert, Williams.
- Somatochlora ensigera*: Defiance, Paulding, Williams.
- Somatochlora tenebrosa*: Adams, Ashland, Athens, Champaign, Coshocton, Cuyahoga, Geauga, Greene, Hocking, Jackson, Lake, Miami, Trumbull, Vinton.
- Somatochlora hineana*: Logan, Lucas, Williams.
- Somatochlora kennedyi*: Erie.
- Cordulia shurtleffi*: Geauga, Portage.
- Dorocordulia libera*: Geauga.
- Nannothemis bella*: Champaign, Miami.
- Perithemis tenera*: (all 88 counties.)

- Celithemis eponina*: Adams, Ashland, Ashtabula, Athens, Auglaize, Brown, Carroll, Champaign, Clark, Clermont, Columbiana, Coshocton, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Gallia, Geauga, Guernsey, Hamilton, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Jackson, Knox, Lake, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Mercer, Miami, Montgomery, Morgan, Morrow, Paulding, Perry, Pickaway, Portage, Preble, Putnam, Richland, Scioto, Shelby, Stark, Summit, Van Wert, Vinton, Warren, Washington, Wayne, Williams, Wyandot.
- Celithemis elisa*: Adams, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Geauga, Guernsey, Hamilton, Hancock, Hardin, Henry, Highland, Hocking, Holmes, Huron, Jackson, Knox, Lake, Lawrence, Licking, Logan, Lucas, Madison, Marion, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Scioto, Shelby, Stark, Summit, Union, Van Wert, Vinton, Warren, Wayne, Williams, Wood, Wyandot.
- Celithemis fasciata*: Ashland, Defiance, Franklin, Hamilton, Jackson, Portage, Summit, Vinton, Williams.
- Erythrodiplax umbrata*: Champaign.
- Erythrodiplax minuscula*: Vinton.
- Libellula deplanata*: Warren.
- Libellula julia*: Portage, Williams.
- Libellula luctuosa*: (all 88 counties.)
- Libellula auripennis*: Hamilton, Ottawa.
- Libellula cyanea*: Adams, Athens, Brown, Clermont, Defiance, Fairfield, Gallia, Guernsey, Harrison, Highland, Hocking, Jackson, Knox, Licking, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Ross, Scioto, Vinton, Washington, Williams.
- Libellula semifasciata*: Adams, Ashland, Ashtabula, Athens, Butler, Champaign, Clinton, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Geauga, Greene, Guernsey, Hamilton, Hocking, Knox, Lake, Licking, Logan, Lucas, Marion, Mercer, Montgomery, Muskingum, Ottawa, Paulding, Portage, Stark, Summit, Trumbull, Tuscarawas, Van Wert, Vinton, Wayne, Williams.
- Libellula pulchella*: (all counties except two: Clark and Fayette.)
- Libellula quadrimaculata*: Ashland, Erie, Franklin, Geauga, Knox, Lake, Lorain, Lucas, Portage, Summit, Tuscarawas, Williams.
- Libellula incesta*: Adams, Ashland, Athens, Defiance, Erie, Gallia, Geauga, Holmes, Jackson, Morgan, Portage, Scioto, Summit, Vinton, Wayne, Williams.
- Libellula vibrans*: Ashland, Cuyahoga, Defiance, Fairfield, Franklin, Hamilton, Hocking, Licking, Logan, Lucas, Morgan, Paulding, Portage, Vinton, Wayne, Williams.
- Libellula lydia*: (all counties except two: Adams, Lawrence.)
- Sympetrum corruptum*: Ashtabula, Erie, Franklin, Fulton, Greene, Hamilton, Licking, Lucas, Ottawa, Paulding, Putnam.
- Sympetrum ambiguum*: Adams, Athens, Butler, Champaign, Clermont, Clinton, Coshocton, Defiance, Erie, Fairfield, Franklin, Greene, Henry, Highland, Knox, Licking, Logan, Mercer, Ottawa, Paulding, Perry, Pickaway, Preble, Shelby, Vinton.
- Sympetrum obtusum*: Ashland, Ashtabula, Butler, Defiance, Erie, Franklin, Henry, Huron, Lake, Licking, Logan, Lucas, Mercer, Muskingum, Ottawa, Paulding, Pickaway, Putnam, Scioto, Shelby, Stark, Summit, Tuscarawas, Vinton, Wayne, Williams, Wood.
- Sympetrum internum*: Lucas, Paulding, Putnam, Scioto, Williams.
- Sympetrum rubicundulum*: Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clinton, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Geauga, Greene, Hamilton, Hancock, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Marion, Medina, Mercer, Miami, Montgomery, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Scioto, Seneca, Shelby, Stark, Summit, Tuscarawas, Union, Van Wert, Vinton, Warren, Wayne, Williams, Wyandot.
- Sympetrum semicinctum*: Allen, Ashland, Ashtabula, Belmont, Butler, Carroll, Champaign, Clark, Crawford, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Geauga, Greene, Hardin, Holmes, Lake, Licking, Logan, Lucas, Marion, Miami, Paulding, Portage, Putnam, Richland, Seneca, Stark, Summit, Van Wert, Vinton, Williams, Wood.
- Sympetrum vicinum*: Adams, Allen, Ashland, Ashtabula, Athens, Belmont, Butler, Carroll, Champaign, Clark, Clermont, Columbiana, Coshocton, Crawford, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Greene, Guernsey, Hamilton, Hancock, Harrison, Highland, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Medina, Meigs, Miami, Montgomery, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Portage, Preble, Putnam, Richland, Ross, Scioto, Seneca, Shelby, Stark, Summit, Trumbull, Tuscarawas, Union, Vinton, Warren, Washington, Wayne, Williams, Wyandot.
- Sympetrum costiferum*: Franklin, Knox, Lucas, Paulding, Putnam, Williams.
- Leucorrhinia intacta*: Ashland, Ashtabula, Champaign, Columbiana, Cuyahoga, Defiance, Delaware, Erie, Fairfield, Franklin, Fulton, Geauga, Hancock, Harrison, Highland, Jackson, Jefferson, Knox, Lake, Licking, Logan, Lorain, Lucas, Marion, Miami, Montgomery, Morgan, Morrow, Muskingum, Ottawa, Paulding, Perry, Portage, Richland, Stark, Summit, Trumbull, Vinton, Wayne, Williams.
- Leucorrhinia frigida*: Geauga, Portage.
- Pachydiplax longipennis*: (all 88 counties.)
- Erythemis simplicicollis*: (all counties except: Mahoning, Van Wert.)
- Pantala hymenaea*: Ashland, Defiance, Erie, Franklin, Geauga, Guernsey, Hamilton, Hancock, Hocking, Lake, Lawrence, Licking, Logan, Lucas, Mahoning, Marion, Meigs, Mercer, Ottawa, Paulding, Portage, Shelby, Tuscarawas, Van Wert, Wayne, Williams.
- Pantala flavescens*: Ashland, Ashtabula, Athens, Butler, Clark, Coshocton, Cuyahoga, Defiance, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Hamilton, Hocking, Knox, Lake, Licking, Logan, Meigs, Montgomery, Ottawa, Paulding, Pickaway, Preble, Seneca, Van Wert, Vinton, Williams.
- Tramea lacerata*: Adams, Ashland, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Gallia, Geauga, Greene, Guernsey, Hamilton, Hancock, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Marion, Medina, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Scioto, Seneca, Shelby, Stark, Summit, Tuscarawas, Union, Van Wert, Vinton, Warren, Wayne, Williams, Wyandot.
- Tramea onusta*: Ashland, Cuyahoga, Delaware, Erie, Franklin, Geauga, Greene, Hamilton, Huron, Lake, Licking, Ottawa, Paulding, Ross, Summit.
- Tramea carolina*: Clinton, Defiance, Delaware, Erie, Fairfield, Franklin, Hamilton, Hocking, Huron, Licking, Lucas, Marion, Meigs, Montgomery, Ottawa, Paulding, Pickaway, Vinton, Williams.



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