

# Ohio Dragon Flyer



# Newsletter of the Ohio Odonata Society

# Ohio Dragon Flyer



Ohio Odonata Society Board

President – Kyle Bailey k47bailey@gmail.com

Vice President – Dave McShaffrey mcshaffd@marietta.edu

Past-President – MaLisa Spring spring.99@osu.edu

*Member-at-Large* – Chelsea Gottfried chelsea.gottfried@gmail.com

Treasurer – Sherree Cyra bluebell101sc@gmail.com

Data Manager – Jim Lemon jlem@woh.rr.com

Newsletter Editor – Jim Lundberg lundbergj@hotmail.com

#### In This Issue

Vice President – Dave McShaffrey.

Any Ode Question.

Subject Series Managers – Seeking Volunteers.

The 2022 Season to Date. Jim Lemon.

Ode Lang Syne – Favorite photos of 2022.

Survey Corner – Hawthorne Crossing. Jim Lundberg

The 2022 Season – Jim Lemon

2022 Ohio Odonata Survey – Counties and Species. Jim Lemon

#### Cover Photo

#### **Spattercock Darner** (Rhionaeschna mutata)

Champaign County, OH. 9 November 2022. Terri Norris OM-1, Olympus 100-400mm @ 400mm, 1/800, f/13, ISO 8000

My default dragonfly settings use an aperture of F8, but I bumped it to F13 to make sure and get adequate depth of field for this dragon. This Spatterdock was a new dragonfly for me! *Terri Norris*.

# Vice President – Dave McShaffrey



Dave McShaffrey is Professor of Biology, Environmental Science and Leadership at Marietta College. He completed his BS and MS at the University of Akron and his PhD in Entomology at Purdue.

Since joining Marietta College in 1989, Dave has worked with the Ohio Odonata Survey (later to become the Ohio Odonata Society); he did field work and museum research as well as writing 5 chapters and co-editing the 2002 book "Dragonflies and Damselflies of Ohio" published by the Ohio Biological Survey and wrote portions of the ODNR pamphlet on Odonata. He has been on both the advisory board and the board of trustees of the OBS and was part of the early discussions with the creators of iNaturalist about how it could be used for community science.

Dave's photographs have appeared in journal articles, magazines, textbooks and field guides. He has also been working on the current survey, contributing more than 5,000 observations. He has attended several Dragonfly Society of the Americas (DSA) meetings and helped organize the 2002 DSA meeting in West Virginia.

Current plans are to hold the 2024 Dragonfly Society of America in Marietta concurrently with the Ohio Odonata Society meeting.

Field Guide to Ohio Odonata: Dave is currently working on the field guide to Ohio Odonata with Jim McCormac and MaLisa Spring (who coordinated the current survey); after covid and other health-related delays, it is anticipated that the book will be available before the 2024 meeting. The book will cover all species of Odonata known to occur in the state with mention of a few likely to be found here in the near future and will be illustrated with color photos by the authors and a host of OOS members who have donated their images to the cause. Distribution data for the state will combine the data from the 2002 book (which has records going back to the 1800's) as well as all the new data (combined over 165,000 records from OOS members and other enthusiasts) all curated into a single database by Jim Lemon. The book will be published by the Ohio Biological Survey and will be designed by Jesse Smith who also designed the recent OBS publication on the natural history of Ohio fish; the two books will be similar in style.

# Any Ode Question

The knowledge base among our society members covers a wide spectrum. If you have questions or answers, please participate. Answers may be one line up to a full page. All answers submitted by the membership will be published in the following newsletter. Recurrent series. Submit questions or answers to <a href="mailto:lundbergi@hotmail.com">lundbergi@hotmail.com</a>

**Q**. Are the number of instars and seasons before emergence as adults entirely species-dependent, or do they also depend on environmental factors? Also, what changes other than size occurs molt to molt? Thank you in advance, Jim Lundberg.

# Subject Series Managers – Seeking Volunteers

As of yet, no one has stepped forward to suggest subject series or to claim management of one of the subject series suggested below. Newsletter content is a reflection of Ohio Odonata Society members and their Ode-related pursuits. Help direct the course of the Ohio Odonata Society!

#### **Conservation Corner**

Backyard habitat improvement. Wetland restoration projects. Regional habitat loss. Regional habitat protection measures. Environmental change affecting Odes. Etc. Photos may accompany articles in this series. Series managers will determine the scope, direction, frequency and termination of the series.

#### **Survey Corner**

Maintaining data collection accuracy. Property permissions. Frequency. Times of day. Expectations versus results. Survey reports of any size – backyard, park, county or statewide. Series managers should have some background in this discipline (Ohio Biological Survey members and etc.). Series managers will determine the scope, direction, frequency and termination of the series.

#### **Any Ode Question**

Any question Ode. Responses may be one-line answers or full-page explanations. The knowledge base among our society members covers a wide spectrum. Volunteer experts, please contact the editor with your area(s) of expertise/interest. In the absence of volunteer experts, questions shall be published in one month's newsletter, and all answers submitted by the membership will be published in the following month's newsletter. Monthly recurrent series.

#### **Field Trip**

Providing more detail than can be found on iNaturalist, field trip reports connect us with Society members from across the state. Whether covering a new destination or a favorite site, by an individual or group, articles will provide elements of human-interest. Photos will accompany most articles in this

series. Series managers will be the point of contact for submissions. In the absence of submissions, the managers will review iNaturalist observations and Odonata Ohio posts for interesting outings from which to solicit submissions. Monthly recurrent series through the flight season.

#### **Observation of the Month**

Observation of the Month is not, necessarily, a stunning image suitable for the Newsletter cover but is significant in other ways – early or late flight date, county record, uncommon species, difficult ID, interesting behavior and etc. Observation of the Month is, probably, best managed by the group of individuals most involved with iNaturalist observation ID. Monthly recurrent series through the flight season.

There are no long-term commitments for the managing volunteers — it is understood that life happens. The subject series manager can be a single individual or a group. Article submissions require a week minimum before end-of-month publishing. This allows time for edit, layout, obtaining observation permissions and return for review.

To volunteer as a subject series manager or offer suggestions for additional series articles, contact Jim Lundberg. <a href="mailto:lundberg">lundberg</a> <a href="mailto:lundberg</a> <a href="mailto:lundberg">lundberg</a> <a href="mailto:lundberg</a> <a href="mailto:lundberg

# Ode Lang Syne 2022

Many thanks to Sarah White, Mike Abel, Cathy Lundberg, Jim Lundberg, Dave Hochadel, Jim Lemon, Linda Gilbert, Jon Cefus, Rick Nirschl, Tami Gingrich, Jacki Riley, Sally Isacco, Jim Heflich, Katie Barricklow, Rick Barricklow, Larry Rosche, Jay Heiser, Dennis Meyers, Shane Myers and Dave Tibbetts for sharing a few of their favorite Ode photos from the Ohio 2022 flight season. Photographers retain full copyright over their images.

### Sarah White



**Dragonhunter** (Hagenius brevistylu)
June 8, 2022. Montgomery County, OH. Sarah White.



**Handsome Clubtail** (Gomphus crassus)

June 4, 2022. Montgomery County, OH. Sarah White.



**Cobra Clubtail** (Gomus vastus)
June 1, 2022. Montgomery County, OH. Sarah White.



Flag-tailed Spinyleg (Dromogomphus spoliatus) Sept. 21, 2022. Greene County, OH. Sarah White.

# Cathy Lundberg



**Halloween Pennant** (Celithemis eponia) 13 July 2022. Clermont County, OH. Cathy Lundberg.



**Eastern Ringtail** (Erpetogomphus designates) 2 Aug 2022. Hamilton County, OH. Cathy Lundberg.



**Twelve-spotted Skimmer** (Libellula pulchella) 20 July 2022. Clermont County, OH. Cathy Lundberg



**Slaty Skimmer** (*Libellula incesta*)
7 July 2022. Adams County, OH. Cathy Lundberg.



Comet Darner (Anax longipes)
13 June 2022. Clermont County, OH. Cathy Lundberg.



Carolina Saddlebags (Tramea Carolina)
7 July 2022.Hamilton County, OH. Cathy Lundberg

#### Mike Abel



**Unicorn Clubtail** (Arigomphus villosipes) 3 June 2022. Miami County, OH. Mike Abel.



Twelve-spotted Skimmer Libellula pulchella 12 August 2022. Fayette County, OH. Mike Abel.



Halloween Pennant (Celithemis eponina) 11 July 2022. Warren County, OH. Mike Abel.



Calico Pennant (Celithemis elisa 3 June 2022. Miami County, OH. Mike Abel.



**Blue-faced Meadowhawk** (Sympetrum ambiguum) 16 September 2022. Greene County, OH. Mike Abel.



**Autumn Meadowhawk** (Smpetrum vicinum) 10 October 2022. Greene County, OH. Mike Abel.

### Jim Lundberg



**Eastern Ringtail** (Erpetogomphus designates) 24 August 2022. Hamilton County, OH. Jim Lundberg.



**Russet-tipped Clubtail** (Stylurus plagiatus) 28 August 2022. Hamilton County, OH. Jim Lundberg.



**Cyrano Darner (Nasiaeschna pentacantha)**3 June 2022. Hamilton County, OH. Jim Lundberg.



**Midland Clubtail** (Gomphus fraternus) 20 May 2022. Adams County, OH. Jim Lundberg.



**Swift River Cruiser** (Macromia illinoiensis) 5 June 2022. Adams County, OH. Jim Lundberg.



**Great Blue Skimmer** (Libellula vibrans)
4 June 2022. Hamilton County, OH. Jim Lundberg.

#### Dave Hochadel



**Tiger Spiketail** (Cordulegaster erronea) 28 June 2022. Hamilton County, OH. Dave Hochadel.



**Plains Clubtail** (Gomphurus externus) June 2022. Ohio. Dave Hochadel.



**Stream Cruiser** (*Didymops transversa*) 24 May 2022. Medina County, OH. Dave Hochadel.



**Seepage Dancer** (Argia bipunctulata) 11 June 2022. Stark County, OH. Dave Hochadel.



**Southern Pygmy Clubtail** (Lanthus vernalis) 8 June 2022. Ashtubula County, OH. Dave Hochadel.

# Jim Lemon



**Furtive Forktail** (Ischnura prognata May 2022. Champaign County, OH. Jim Lemon



Handsome Clubtail (Gomphurus crassus) June 2022. Darke County, OH. Jim Lemon.



**Uhler's Sundragon** (Helocordulia uhleri) May 2022, Hocking County, OH. Jim Lemon.



**Northern Spreadwing** (Lestus disjunctus) June 2022. Williams County, OH. Jim Lemon.



**Double-ringed** *Pennant* (Celithemis verna) 21 June 2022. Jackson County, Ohio. Jim Lemon.



Swift Setwing (Dythemis velox)
September 2022. Champaign County, OH. Jim Lemon.

### Jim Heflich



**Dragonhunter** (Hagenius brevistylus) 10 June 2022. County, OH. Jim Heflich.



**Green-faced Clubtail** (Hylogomphus viridifrons) 10 June 2022. County, OH. Jim Heflich.



**Delta-spotted Spiketail** (Cordulegaster diastatops) 11 June 2022. Ashtabula County, OH. Jim Heflich.



**Splendid Clubtail** (Gomphurus lineatifrons) 27 June 2022. Lake County, OH. Jim Heflich



**Yellow-sided Skimmer** (Libellula flavida) 15 June 2022. Pike County, OH. Jim Heflich.



**White-faced Meadowhawk** (Sympetrum obtrusum) 13 August 2022. Geauga County, OH. Jim Heflich.

# Sally Isacco



**Stream Cruiser** (*Didymops transversa*) 25 May 2022. Medina County, OH. Sally Isacco.



**Harlequin Darner** (Gomphaeschna furcillata) 29 May 2022. Geauga County, OH. Sally Isacco



**Beaverpond Baskettail** (Epitheca canis) 15 May 2022. Lake County, OH. Sally Isacco.



**Tule Bluet** (Enallagma carunculatum) 7 September 2022. Trumbull County, OH. Sally Isacco.



Black-tipped Darner (Aeshna tuberculifera)
16 September 2022. Lake County, OH. Sally Isacco.



**Golden-winged Skimmer** (Libellula auripennis) 14 July 2022. Hocking County Lake, OH. Sally Isacco.

### Rick Nirschl



**Mocha Emerald** (Somatochlora linearis) July 2022. Ohio. Rick Nirschl



**Blue Dasher** (*Pachydiplax longipennis*) 14 June 2022. Lucas County, OH. Rick Nirschl



Riffle Snaketail (Ophiogomphus carolus) 19 June 2022. Lake County, OH. Rick Nirschl



**Dragonhunter** (Hagenius brevistylu) 10 July 2022. Hocking County, OH. Rick Nirschl



Black Saddlebags (Tramea lacerata)
18 September 2022. Lucas County, OH. Rick Nirschl



**Common Sanddragon** (*Progomphus obscurus*) 10 July 2022. *Pike County, OH. Rick Nirschl.* 



Blue-faced Meadowhawk (Sympetrum ambiguum) 1 October 2022. Lucas County, OH. Rick Nirschl



Red Saddlebags (Tramea onusta)
2 August 2022. Lucas County, OH. Rick Nirschl.



Ruby Meadowhawk (Sympetrum rubicundulum) 14 July 2022. Lucas County, OH. Rick Nirschl.



**Royal River Cruiser** (*Macromia taeniolata*) 24 August 2022. Lucas County, OH. Rick Nirschl.

### Tami Gingrich

#### Katie Barricklow



**Ocellated Darner** (Boyeria grafiana) September 2022. Ohio. Tami Gingrich.



Eastern Amberwing (Perithemis tenera) Margined Calligrapher (Toxomerus marginatus) 2022. Lake Loramie, OH. Katie Barricklow



Jackie Riley

**Little Blue Dragonlet** (Erythrodiplax miniscula) 29 may 2022. Lucas County, OH. Jackie Riley.



**Green-striped Darner** (Aeshna verticalis) 2022. Lucas County, OH. Katie Barricklow.

### Rick Barricklow



Comet Darner (Anax longipes)
Familiar Bluet (Enallagma civile)
2022. Lucas County, OH. Rick Barricklow



Comet Darner (Anax longipes) (as predator) Prince Baskettail (Epitheca princeps) (as prey) 2022. Lucas County, OH. Rick Barricklow.



**Painted Skimmer** (Libellula semifasciata) 2022. Lucas County, OH. Rick Barricklow



**Common Green Darner** (Anax junius) 2022. Lucas County, OH. Rick Barricklow.

#### Larry Rosche



**Splendid Clubtail** (Gomphurus lineatifrons)
June 2022. Portage County, OH. Larry Rosche.



**Calico Pennant** (*Celithemis elisa*) 2022. OH. Jay Heiser.

# Jay Heiser



**American Rubyspot** (Hetaerina americana) 2022. OH. Jay Heiser



**Blue-fronted Dancer** (Argia apicalis) 2022. OH. Jay Heiser



**Double-striped Bluet** (Enallagma basidens) 2022. OH. Jay Heiser



**Unicorn Clubtail** (Arigomphus villosipes) 2022. OH. Jay Heiser



**Stream Bluet** (Enallagma exsulans) 2022. OH.Jay Heiser

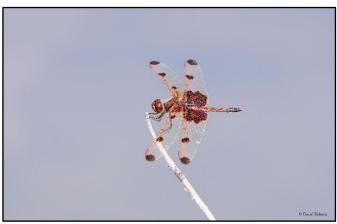


**Stream Bluet** (Enallagma exsulans) 2022. OH. Jay Heiser.

#### **Dave Tibbetts**



**Banded Pennant** (Celithemis fasciata) 8 June 2022. Clermont County, OH. Dave Tibbets



**Calico Pennant** (Celithemis elisa) 14 June 2022. Clermont County, OH. Dave Tibbets.



**Eastern Ringtail** (Erpetogomphus designates) 19 August 2022. Hamilton County, OH. Dave Tibbets.



Flag-tailed Spinyleg (Dromogomphus spoliatus) 15 July 2022. Clermont County, OH. Dave Tibbets.



**Red Saddlebags** (*Tramea onusta*) 9 September 2022. Clermont County, OH. Dave Tibbets.

### Jon Cefus



Plains Clubtail (Gomphurus externus) June 2022 Stark County, OH. Jon Cefus

#### **Dennis Meyers**



**Amber-winged Spreadwing** (Lestus eurinus) 20 May 2022. Clermont County, OH. Dennis Meyers.



Blue Corporal (Ladona deplanata) 14 May 2022. Clermont County, OH. Dennis Meyers.



**Elusive Clubtail** (Stylurus notatus) 21 Oct 2022. Hamilton County, OH. Dennis Meyers



**Blue-ringed Dancer** (Argia sedula) 23 July 2022. Hamilton County, OH. Dennis Meyers.



**Spangled Skimmer** (Libellula cyanea) 10 July 2022. Clermont County, OH. Dennis Meyers.



Swamp Darner (Epiaeschna heros)
20 May 2022. Clermont County, OH. Dennis Meyers.



**White-faced Meadowhawk** (Sympetrum obtrusum) 16 Oct 2022. Clermont County, OH. Dennis Meyers.

#### Linda Gilbert



**Eastern Least Clubtail** (Stylogomphus albistylus) 14 June 2022. Geauga County, OH. Linda Gilbert.



**Harlequin Darner** (Gomphaeschna furcillata) 6 June 2022. Geauga County, OH. Linda Gilbert.



Rainbow Bluet (Enallagma antennatum) 8 June 2022. Geauga County, OH. Linda Gilbert.

# Shane Myers



**River Bluet** (Enalagma anna) 4 June 2022. Hancock County, OH. Shane Myers

# Survey Corner – Hawthorne Crossing Jim Lundberg

Think horses and wagons. One hundred years ago, Hawthorne was a reliable low-water crossing point of the lower Licking River in Kentucky. Today it is a conservation area.

I have been intending to spend more Ode time in the state of my residence, Kentucky, and Hawthorne Crossing Conservation Area is only a 20-minute drive from my house. Purchased in 2008 by the Campbell County (Kentucky) Conservation District, Hawthorne Crossing is not yet open to the public, so I applied for a research permit to conduct an Odonate survey during the 2023 flight season. With assurance of minimal environmental impact and that the few Odonate species requiring capture and release to identify down to species are not threatened, the Board of Directors approved the permit with the following guidelines:

- You use the INaturalist app to record your findings for the Hawthorne property
- Provide to the District dates and times you are accessing the property
- Provide to the District your findings upon completion of the research
- Recognize the Campbell County Conservation
   District on any publications as a result of the research

The district manager gave me the required property orientation this Fall. Riffle Creek, along the southeastern boundary of the property has water flowing year-round with a few pools. One of Riffle Creek's pools is below stonework remains of the bridge that crossed Riffle Creek leading to the Licking River crossing. We were able to locate only two of the three farm ponds shown on the map. Both are small and shallow. The crossing looked good on Google maps with Water Willow and cobble extending more than halfway across the Licking. Since the satellite

image, a large tree dropped into the river, creating a deep channel along the shoreline, limiting access. Farther downriver on the property, there are a few accessible narrow cobble beaches, albeit without Water Willow. The land is a mix of forest, successional farm fields and small tracts undergoing the process of prairie restoration. The terrain is fairly steep down to the western boundary on the Licking River and the southern boundary along Riffle Creek.

Flowing three hundred miles through Kentucky, the Licking River is a conduit for northern expansion of southern species. Although the confluence of the Licking with the Ohio is between the Little Miami River and the Greater Miami River, it is slower-flowing and, perhaps, more silted in the lower section. Floating six miles of the Licking in 2022, I was surprised to observe hundreds of Smoky Rubyspots, a species with only a single iNat observation on the Miami rivers. I'm hoping that a season survey of Hawthorne Crossing will yield more surprises.

My survey expectations are the 10 most-observed Odonates in the Ohio Survey plus Common Green Darner, Wandering Glider, Powdered Dancer, Familiar Bluet, Rapid River Cruiser and Smoky Rubyspot. Other species that wouldn't be a surprise include some of the more common Bluets and Dancers, one or two early season Clubtails, Black Saddlebags, Carolina Saddlebags, Black-shouldered Spiny-legs and Unicorn Clubtail. Over-under is 21 species. Follow-up article in November.

Note: Survey Corner will be a recurring series with information on maintaining data collection accuracy and property permissions, expectations versus results. Survey reports of any size – backyard, park, county or statewide. Please share your survey endeavors and expertise with the Society.

#### The 2022 Season Jim Lemon jlem@woh.rr.com

It seems we're never quite done on data. Observations continue to come into iNaturalist for 2022 and earlier years. So, reporting numbers is an ongoing exercise. The numbers that follow are the current report.

For 2022, we have at least 35,371 research grade (RG) observation submitted to iNaturalist. 2022 is now the most reported Odonata season for all of OOS data. New monthly highs were also reported for May, Jun, and Oct.

This set of observations represents 136 species, from 1,033 contributors. The top reported species for the year: Blue Dasher, Eastern Pondhawk, Eastern Forktail, Fragile Forktail, and Common Whitetail. 56 species tied or exceeded their previous annual maximum.

Lucas County is the current leader in observations with 3,012. Franklin County had the highest number of observers with 117. Montgomery County was the leader for the number of species reported with 79. 36 Counties established new high counts on either observations or the number of species recorded.

The Ohio flight season for adult Odonata in the wild was Mar 3 to Nov 10. The Mar 3 Common Green Darner (from smwhite in Montgomery County) set a new early flight for the OOS database. 15 different people submitted observations for Nov 10 – after which the weather was apparently no longer conducive.

2022 saw the expansion of flight period for 22 species, 13 species with new early flight dates and 9 species with new late flight dates.

New County Records are at 127. Great Blue Skimmer and Painted Skimmer both were reported in 7 new Counties. Columbiana County had the most new species with 6.

# 2022 Ohio Odonata Survey (as of 12/28/2022)

|             | #            |      |         |        |          | New    |        |
|-------------|--------------|------|---------|--------|----------|--------|--------|
|             |              |      |         | " -    | # New Co | Yearly | New Sp |
| 88 Counties | Observations | # Sp | # Users | # Days | Records  | High   | High   |
| Adams       | 108          | 34   | 22      | 27     | 0        |        |        |
| Allen       | 71           | 24   | 6       | 16     | 1        |        |        |
| Ashland     | 249          | 36   | 13      | 30     | 0        | *      |        |
| Ashtabula   | 2374         | 67   | 19      | 148    | 0        | *      |        |
| Athens      | 111          | 34   | 21      | 34     | 0        |        |        |
| Auglaize    | 67           | 23   | 2       | 6      | 3        |        |        |
| Belmont     | 393          | 27   | 2       | 7      | 2        | *      | *      |
| Brown       | 74           | 32   | 6       | 6      | 0        |        |        |
| Butler      | 617          | 41   | 50      | 108    | 1        |        |        |
| Carroll     | 106          | 27   | 6       | 14     | 1        |        |        |
| Champaign   | 1283         | 68   | 41      | 73     | 1        |        | *      |
| Clark       | 856          | 59   | 25      | 74     | 3        | *      | *      |
| Clermont    | 385          | 51   | 43      | 116    | 2        |        |        |
| Clinton     | 112          | 30   | 12      | 23     | 0        |        |        |
| Columbiana  | 159          | 46   | 11      | 20     | 6        |        | *      |
| Coshocton   | 1409         | 58   | 13      | 116    | 3        | *      | *      |
| Crawford    | 116          | 34   | 6       | 32     | 3        |        |        |
| Cuyahoga    | 752          | 52   | 98      | 136    | 0        |        |        |
| Darke       | 217          | 46   | 7       | 25     | 1        |        |        |

| Defiance   | 56   | 21 | 6   | 9   | 0 |   |   |
|------------|------|----|-----|-----|---|---|---|
| Delaware   | 272  | 38 | 44  | 64  | 1 |   |   |
| Erie       | 268  | 30 | 24  | 68  | 0 | * |   |
| Fairfield  | 138  | 31 | 22  | 26  | 1 |   |   |
| Fayette    | 168  | 32 | 5   | 15  | 2 |   |   |
| Franklin   | 2341 | 62 | 117 | 144 | 1 |   | * |
| Fulton     | 214  | 30 | 6   | 23  | 0 | * |   |
| Gallia     | 141  | 25 | 7   | 14  | 0 |   |   |
| Geauga     | 550  | 69 | 40  | 91  | 1 |   |   |
| Greene     | 745  | 64 | 62  | 108 | 1 |   |   |
| Guernsey   | 126  | 23 | 3   | 5   | 0 |   |   |
| Hamilton   | 722  | 56 | 67  | 120 | 1 | * |   |
| Hancock    | 392  | 60 | 19  | 83  | 3 |   |   |
| Hardin     | 85   | 32 | 3   | 18  | 1 |   |   |
| Harrison   | 274  | 38 | 5   | 24  | 3 | * |   |
| Henry      | 315  | 34 | 6   | 17  | 1 | * | * |
| Highland   | 76   | 28 | 13  | 17  | 0 |   |   |
| Hocking    | 121  | 36 | 24  | 30  | 0 |   |   |
| Holmes     | 205  | 29 | 8   | 27  | 1 | * | * |
| Huron      | 340  | 29 | 5   | 31  | 3 | * | * |
| Jackson    | 120  | 31 | 8   | 18  | 0 |   |   |
| Jefferson  | 231  | 34 | 7   | 26  | 3 | * | * |
| Knox       | 156  | 22 | 17  | 22  | 0 |   |   |
| Lake       | 603  | 68 | 45  | 82  | 1 |   |   |
| Lawrence   | 231  | 38 | 4   | 10  | 2 | * | * |
| Licking    | 198  | 34 | 25  | 43  | 1 |   |   |
| Logan      | 401  | 47 | 16  | 46  | 2 | * |   |
| Lorain     | 752  | 49 | 37  | 112 | 1 |   |   |
| Lucas      | 3012 | 76 | 74  | 169 | 1 | * |   |
| Madison    | 240  | 34 | 15  | 22  | 3 |   |   |
| Mahoning   | 105  | 42 | 10  | 48  | 1 |   |   |
| Marion     | 329  | 30 | 8   | 9   | 4 | * |   |
| Medina     | 216  | 44 | 31  | 63  | 2 |   |   |
| Meigs      | 381  | 31 | 1   | 4   | 3 | * |   |
| Mercer     | 93   | 22 | 3   | 7   | 2 |   |   |
| Miami      | 485  | 54 | 21  | 23  | 0 | * | * |
| Monroe     | 187  | 28 | 2   | 5   | 2 | * |   |
| Montgomery | 1211 | 79 | 50  | 123 | 3 |   | * |
| Morgan     | 144  | 32 | 7   | 13  | 2 |   |   |
| Morrow     | 491  | 31 | 15  | 24  | 1 | * | * |
| Muskingum  | 201  | 34 | 9   | 26  | 0 |   |   |
| Noble      | 372  | 27 | 7   | 9   | 0 | * | * |
| Ottawa     | 185  | 31 | 50  | 56  | 5 |   |   |
| Paulding   | 59   | 21 | 2   | 4   | 0 |   |   |
|            |      |    |     |     |   |   |   |

| Perry      | 94   | 21 | 1   | 24  | 1 |   |   |
|------------|------|----|-----|-----|---|---|---|
| Pickaway   | 124  | 34 | 16  | 24  | 3 |   |   |
| Pike       | 267  | 40 | 9   | 14  | 3 | * |   |
| Portage    | 464  | 76 | 52  | 81  | 3 |   | * |
| Preble     | 230  | 36 | 12  | 20  | 3 |   |   |
| Putnam     | 125  | 23 | 1   | 7   | 0 |   |   |
| Richland   | 137  | 30 | 15  | 27  | 1 |   |   |
| Ross       | 114  | 34 | 13  | 16  | 0 |   |   |
| Sandusky   | 254  | 42 | 11  | 36  | 4 | * | * |
| Scioto     | 117  | 33 | 9   | 15  | 3 |   |   |
| Seneca     | 287  | 31 | 7   | 12  | 3 | * |   |
| Shelby     | 139  | 34 | 15  | 13  | 5 |   |   |
| Stark      | 2755 | 76 | 45  | 129 | 4 | * | * |
| Summit     | 1075 | 73 | 111 | 131 | 0 |   | * |
| Trumbull   | 140  | 39 | 10  | 28  | 1 |   |   |
| Tuscarawas | 192  | 29 | 6   | 15  | 1 | * |   |
| Union      | 331  | 28 | 10  | 23  | 0 | * |   |
| Van Wert   | 52   | 22 | 1   | 4   | 0 |   |   |
| Vinton     | 133  | 30 | 8   | 16  | 0 |   |   |
| Warren     | 232  | 45 | 32  | 60  | 2 |   |   |
| Washington | 100  | 27 | 3   | 7   | 0 |   |   |
| Wayne      | 220  | 31 | 26  | 59  | 1 | * | * |
| Williams   | 141  | 37 | 4   | 6   | 1 |   |   |
| Wood       | 157  | 33 | 27  | 43  | 2 |   |   |
| Wyandot    | 80   | 29 | 12  | 16  | 0 |   |   |

|                           | #            |            |         |        | # New Co | New Yearly |
|---------------------------|--------------|------------|---------|--------|----------|------------|
| 136 Species               | Observations | # Counties | # Users | # Days | Records  | High       |
| Amber-winged Spreadwing   | 62           | 15         | 20      | 25     | 1        |            |
| American Rubyspot         | 593          | 38         | 76      | 114    | 0        | *          |
| Arrow Clubtail            | 20           | 7          | 9       | 14     | 0        |            |
| Arrowhead Spiketail       | 19           | 10         | 14      | 12     | 1        |            |
| Ashy Clubtail             | 102          | 19         | 28      | 34     | 0        | *          |
| Aurora Damsel             | 44           | 15         | 22      | 22     | 1        |            |
| Autumn Meadowhawk         | 1340         | 72         | 157     | 134    | 0        | *          |
| Azure Bluet               | 311          | 54         | 73      | 83     | 1        |            |
| Band-winged Meadowhawk    | 125          | 16         | 36      | 51     | 2        |            |
| Banded Pennant            | 114          | 20         | 24      | 44     | 2        |            |
| Beaverpond Baskettail     | 2            | 1          | 1       | 1      | 0        |            |
| Black Saddlebags          | 544          | 73         | 100     | 121    | 0        | *          |
| Black-shouldered Spinyleg | 59           | 22         | 22      | 28     | 1        |            |
| Black-tipped Darner       | 7            | 3          | 5       | 4      | 0        |            |

| Blue Corporal           | 27   | 11 | 19  | 18  | 2 |   |
|-------------------------|------|----|-----|-----|---|---|
| Blue Dasher             | 2482 | 88 | 279 | 135 | 0 |   |
| Blue-faced Meadowhawk   | 208  | 22 | 46  | 61  | 2 |   |
| Blue-fronted Dancer     | 971  | 80 | 122 | 116 | 0 | * |
| Blue-ringed Dancer      | 344  | 42 | 46  | 77  | 0 |   |
| Blue-tipped Dancer      | 689  | 71 | 89  | 84  | 1 | * |
| Brown Spiketail         | 15   | 4  | 5   | 7   | 0 |   |
| Calico Pennant          | 385  | 52 | 71  | 86  | 0 |   |
| Carolina Saddlebags     | 208  | 41 | 62  | 69  | 2 |   |
| Cherry-faced Meadowhawk | 1    | 1  | 1   | 1   | 0 |   |
| Citrine Forktail        | 165  | 33 | 35  | 70  | 3 |   |
| Clamp-tipped Emerald    | 9    | 8  | 8   | 8   | 0 |   |
| Cobra Clubtail          | 59   | 4  | 22  | 20  | 0 |   |
| Comet Darner            | 104  | 32 | 36  | 44  | 6 | * |
| Common Baskettail       | 38   | 19 | 24  | 16  | 1 |   |
| Common Green Darner     | 512  | 70 | 118 | 156 | 0 |   |
| Common Sanddragon       | 17   | 4  | 4   | 5   | 0 |   |
| Common Whitetail        | 1742 | 88 | 290 | 142 | 0 | * |
| Cyrano Darner           | 43   | 21 | 21  | 27  | 3 | * |
| Delta-spotted Spiketail | 8    | 2  | 3   | 4   | 0 |   |
| Dot-tailed Whiteface    | 211  | 32 | 37  | 43  | 3 | * |
| Double-ringed Pennant   | 6    | 1  | 1   | 1   | 0 |   |
| Double-striped Bluet    | 677  | 71 | 74  | 126 | 0 |   |
| Dragonhunter            | 72   | 19 | 30  | 36  | 1 |   |
| Dusky Clubtail          | 28   | 4  | 7   | 10  | 0 | * |
| Dusky Dancer            | 265  | 46 | 42  | 70  | 0 | * |
| Eastern Amberwing       | 1587 | 88 | 171 | 119 | 0 | * |
| Eastern Forktail        | 2288 | 88 | 172 | 169 | 0 |   |
| Eastern Least Clubtail  | 48   | 8  | 13  | 17  | 0 | * |
| Eastern Pondhawk        | 2467 | 88 | 259 | 143 | 0 | * |
| Eastern Red Damsel      | 193  | 20 | 45  | 47  | 1 | * |
| Eastern Ringtail        | 21   | 4  | 7   | 10  | 0 |   |
| Ebony Jewelwing         | 1115 | 77 | 291 | 107 | 1 | * |
| Elegant Spreadwing      | 66   | 20 | 23  | 32  | 1 | * |
| Elfin Skimmer           | 81   | 1  | 18  | 21  | 0 | * |
| Elusive Clubtail        | 13   | 1  | 4   | 7   | 0 | * |
| Emerald Spreadwing      | 79   | 17 | 29  | 28  | 0 | * |
| Familiar Bluet          | 881  | 78 | 105 | 150 | 0 | * |
| Fawn Darner             | 42   | 20 | 25  | 31  | 0 |   |
| Flag-tailed Spinyleg    | 92   | 21 | 19  | 35  | 1 |   |
| Fragile Forktail        | 1920 | 88 | 176 | 170 | 0 | * |
| Furtive Forktail        | 1    | 1  | 1   | 1   | 1 |   |
| Gilded River Cruiser    | 7    | 4  | 4   | 5   | 0 |   |
| Golden-winged Skimmer   | 6    | 3  | 4   | 4   | 2 |   |

| Gray Petaltail         | 60  | 14 | 29  | 29  | 2 | * |
|------------------------|-----|----|-----|-----|---|---|
| Great Blue Skimmer     | 174 | 32 | 45  | 64  | 7 | * |
| Great Spreadwing       | 115 | 25 | 48  | 55  | 1 |   |
| Green-faced Clubtail   | 14  | 1  | 4   | 4   | 0 | * |
| Green-striped Darner   | 9   | 6  | 8   | 9   | 0 |   |
| Halloween Pennant      | 482 | 71 | 117 | 87  | 0 |   |
| Handsome Clubtail      | 17  | 6  | 7   | 11  | 1 |   |
| Harlequin Darner       | 24  | 3  | 8   | 7   | 0 | * |
| Jade Clubtail          | 26  | 4  | 11  | 4   | 2 | * |
| Lance-tipped Darner    | 4   | 4  | 4   | 4   | 0 |   |
| Lancet Clubtail        | 240 | 38 | 37  | 51  | 1 | * |
| Laura's Clubtail       | 2   | 2  | 2   | 2   | 0 |   |
| Lilypad Clubtail       | 1   | 1  | 1   | 1   | 0 | _ |
| Lilypad Forktail       | 102 | 8  | 22  | 29  | 0 |   |
| Little Blue Dragonlet  | 1   | 1  | 1   | 1   | 1 | _ |
| Lyre-tipped Spreadwing | 8   | 2  | 5   | 7   | 1 |   |
| Macromia Hybrid        | 8   | 5  | 6   | 5   | 2 |   |
| Midland Clubtail       | 84  | 17 | 22  | 29  | 2 |   |
| Mocha Emerald          | 9   | 7  | 5   | 8   | 1 |   |
| Northern Bluet         | 3   | 2  | 3   | 2   | 0 |   |
| Northern Spreadwing    | 1   | 1  | 1   | 1   | 1 |   |
| Ocellated Darner       | 12  | 4  | 6   | 6   | 1 | * |
| Orange Bluet           | 585 | 72 | 70  | 125 | 1 | * |
| Painted Skimmer        | 290 | 42 | 76  | 60  | 7 | * |
| Paiute Dancer          | 65  | 4  | 17  | 18  | 0 |   |
| Plains Clubtail        | 35  | 1  | 6   | 16  | 0 |   |
| Powdered Dancer        | 747 | 56 | 95  | 101 | 0 | * |
| Prince Baskettail      | 385 | 76 | 64  | 87  | 0 |   |
| Pronghorn Clubtail     | 19  | 5  | 10  | 12  | 0 | _ |
| Racket-tailed Emerald  | 10  | 3  | 6   | 2   | 0 |   |
| Rainbow Bluet          | 22  | 6  | 10  | 11  | 0 | _ |
| Rapids Clubtail        | 15  | 7  | 10  | 9   | 1 |   |
| Red Saddlebags         | 21  | 7  | 10  | 15  | 2 | * |
| Riffle Snaketail       | 3   | 1  | 3   | 3   | 0 |   |
| River Bluet            | 9   | 1  | 7   | 4   | 0 | * |
| River Jewelwing        | 1   | 1  | 1   | 1   | 0 |   |
| Royal River Cruiser    | 55  | 31 | 29  | 40  | 3 |   |
| Ruby Meadowhawk        | 19  | 8  | 9   | 13  | 1 |   |
| Russet-tipped Clubtail | 54  | 3  | 11  | 22  | 1 | * |
| Rusty Snaketail        | 24  | 4  | 9   | 11  | 0 | * |
| Sedge Sprite           | 76  | 13 | 22  | 27  | 2 | * |
| Seepage Dancer         | 193 | 5  | 34  | 39  | 0 | * |
|                        |     |    |     |     |   |   |
| Shadow Darner          | 146 | 33 | 63  | 67  | 1 | * |

| Slaty Skimmer            | 776  | 68 | 107 | 105 | 5 | * |
|--------------------------|------|----|-----|-----|---|---|
| Slender Baskettail       | 2    | 2  | 2   | 2   | 1 |   |
| Slender Spreadwing       | 579  | 67 | 87  | 109 | 0 | * |
| Smoky Rubyspot           | 58   | 4  | 5   | 18  | 0 |   |
| Southern Pygmy Clubtail  | 5    | 3  | 4   | 4   | 1 |   |
| Southern Spreadwing      | 8    | 6  | 7   | 7   | 1 |   |
| Spangled Skimmer         | 166  | 41 | 45  | 52  | 5 |   |
| Spatterdock Darner       | 16   | 7  | 12  | 12  | 0 |   |
| Sphagnum Sprite          | 74   | 8  | 21  | 24  | 0 | * |
| Splendid Clubtail        | 11   | 2  | 7   | 7   | 0 |   |
| Spot-winged Glider       | 55   | 19 | 23  | 27  | 0 |   |
| Spotted Spreadwing       | 98   | 22 | 28  | 38  | 2 | * |
| Springtime Darner        | 24   | 14 | 17  | 15  | 1 |   |
| Stream Bluet             | 611  | 64 | 78  | 94  | 0 | * |
| Stream Cruiser           | 18   | 5  | 7   | 7   | 1 | * |
| Swamp Darner             | 70   | 30 | 49  | 39  | 4 |   |
| Swamp Spreadwing         | 61   | 21 | 22  | 36  | 3 |   |
| Sweetflag Spreadwing     | 54   | 22 | 27  | 36  | 2 | * |
| Swift River Cruiser      | 52   | 21 | 20  | 34  | 0 |   |
| Swift Setwing            | 52   | 7  | 10  | 21  | 2 | * |
| Tiger Spiketail          | 6    | 5  | 5   | 5   | 0 |   |
| Tule Bluet               | 48   | 10 | 11  | 25  | 0 |   |
| Turquoise Bluet          | 105  | 17 | 20  | 27  | 2 |   |
| Twelve-spotted Skimmer   | 510  | 63 | 122 | 96  | 0 |   |
| Twin-spotted Spiketail   | 3    | 3  | 3   | 3   | 1 |   |
| Uhler's Sundragon        | 6    | 1  | 1   | 1   | 0 |   |
| Unicorn Clubtail         | 308  | 51 | 70  | 47  | 1 | * |
| Vesper Bluet             | 109  | 23 | 22  | 45  | 4 | * |
| Violet Dancer            | 1118 | 77 | 108 | 117 | 0 | * |
| Wandering Glider         | 205  | 45 | 70  | 72  | 3 |   |
| Westfall's Slender Bluet | 332  | 49 | 60  | 57  | 4 | * |
| White-faced Meadowhawk   | 24   | 7  | 12  | 18  | 1 |   |
| Widow Skimmer            | 1595 | 88 | 232 | 126 | 0 |   |
| Yellow-sided Skimmer     | 30   | 1  | 3   | 4   | 0 | * |
|                          |      |    |     |     |   |   |