Newsletter of the Ohio Odonata Society

Ohio Dragon Flyer

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In This Issue

Cover Photo

Mocha Emerald *Somatochlora linearis*
Northern Ohio, July 2021

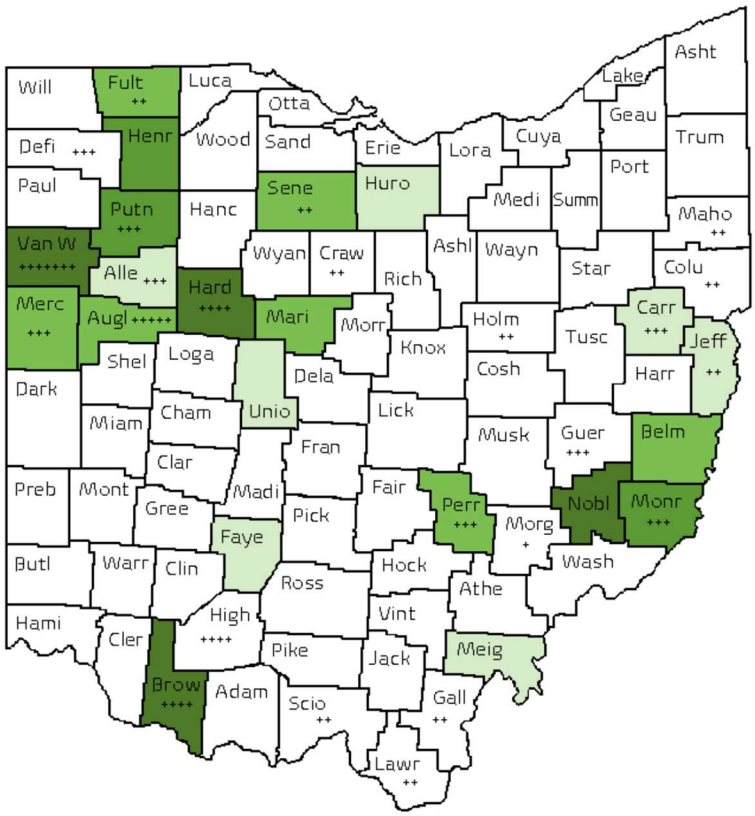
Olympus OM-D E-M5III micro 4/3 camera. M.Zuiko Pro 40-150mm with the Zuiko 1.4x teleconverter and flash. *f*2.8, 1/60, f4, ISO200

I was thrilled when this critter perched nearby. I usually don't have that kind of luck--LOL! It was my first really good look at this species. I admit to doing a happy dance at the time.

Linda Gilbert

Survey Target Counties for 2023

Last season (2022) saw progress based on published county level goals for observations and species. Refer to the Journal on the Ohio Dragonfly Survey project on iNaturalist: the 2022 journal articles March 04, March 12, July 13 and the January 04, 2023 journal for descriptions and progress. We moved the needle considerably on observations, less so on species. Goals are good. Looking at county data provides a view on where we need more attention (#observations, #species, comparison to historical, comparison to adjacent counties). The map of counties, below, highlights these target counties. The darker the color, the greater the need. Four counties are at the top of the needs list - Van Wert, Hardin, Noble, and Brown. Everything highlighted needs more species. Finding new species requires people looking.



If your county is blank, good job. Keep it up and maybe venture to one of the darker green counties. An extra bit (the +'s) helps see relative need compared to 2022. Each + sign indicates the multiple of the 2022 observations we need in 2023 to keep relative pace to the overall survey. Back to our priority targets - Van Wert was the 2022 low for observations (52), and one of the 4 counties that had just a single observer. Van Wert is also on the low side in total observations (649). If we pick a target of getting to 1,000 observations, we need 7 times the 2022 observation count. 1,000 observations for every county may be ambitious, but again, goals are good.

Any Ode Answer – What's in a Name?

Q. Why do the newsletter articles include both species Common Name and Scientific name?

A. There were two answers submitted – this by David Goldstein:

While it's true that common names are well recognized for lots of odonates, those names still remain more ambiguous, unsettled, and potentially confusing than scientific names. The assignment of scientific names typically is overseen by some official body that is accepted as the authority, so that the same scientific name is accepted everywhere. In contrast, common names, even if they have "official" status in some regions (such as provided by the Checklist Committee of the Dragonfly Society of the Americas), often are subject to local or historical peculiarities. So, a single species might go by several common names—especially if it's geographically widespread. For example, Pantala flavescens probably is the world's most widely distributed dragonfly, occurring on every continent except Antarctica. It's therefore not surprising that it goes by several names even in English (globe skimmer, globe wanderer, wandering glider), never mind in the languages of the dozens of countries where it can be found (Pantale Flavescente in French; Wereldzwerver in Flemish; Frecciaerrante in Italian; dugorepi konjic lutalica in Serbian; etc. etc.; all names taken from https://www.iucnredlist.org/species/59971/65818523). Note that it can work the other way around too; a single common name can denote more than one species. The green-striped darner refers to Aeshna verticalis in the US, but to a different species, Dromaeschna forcipata, from a completely different family, in Australia. iNaturalist tries to capture some of the diversity of common names; the entry for wandering glider notes a number of alternative names, in several languages. But it can't be comprehensive, and the scientific name is the same for everyone.

I might add that scientific names also are interesting. Tachopteryx thoreyi, the grey petaltail mentioned in the question, is named partly for its characteristics (the genus Tachopteryx means "fast-winged") and partly for its history (the species name thoreyi recognizes M. Thorey, the person who provided the holotype specimen for this species). Pantala flavescens is the "all-wandering yellow" dragonfly.

Etymologies can be found in A Checklist of North American Odonata, 2021 Edition, by Paulson and Dunkle, https://www.odonatacentral.org/public/media/uploads/files/NA_Odonata_Checklist_2021_update.pdf.

Bottom line: In the US, dragonflies are well-enough known, described, and appreciated that common names are well established, even if some alternatives remain in use. But that's less true in many other parts of the world, and definitely not for other groups of less "charismatic" organisms. Publications that might reach a broad audience still benefit from including the unambiguous scientific name, even if it's noted just once at the start of the write-up.

David Goldstein

A. And the second answer by Bob Glotzhober rglotz@twc.com:

Is it an Erroneous Biddie or a *Cordulegaster erronea*? Common Names for Odonata

"Every six-year-old knows what a Tyrannosaurus and Stegosaurus is. Why can't adults learn names like Cordulegaster, Nannothemis and Calopteryx?" That was an argument bantered around during the annual meeting of the Dragonfly Society of the Americas in Silver City, New Mexico in the summer of 1995. Other voices urged that while both amateurs and professionals who got serious about dragonflies and damselflies could easily learn scientific names, common names (or English names) for these animals might make it easier for a broader, non-scientific orientated group to gain greater familiarity with these fascinating animals.

Prior to 1996, there was no "official" list of English names for Odonata in North America. Several people had made attempts at this, including Don Borror (famous for the Peterson Field Guide to Insects and many other things, both entomological and relative to bird song). Most of these were pretty poor attempts and never widely accepted. How about that "Erroneous Biddie" mentioned above, which was just an anglicization of the scientific name of the Tiger Spiketail. Pretty awkward! Lots of other folks also put forth names – which varied as they were used, which is typical for "unofficial common names". Some that appear on my old slide mounts include: Green Jacket (Eastern Pondhawk); Black-winged Damsel (Ebony Jewelwing); Twilight Bog Skimmer (Clamp-tipped Emerald); Dwarf Skimmer (Elfin Skimmer) and Blue Pirate (Blue Dasher). Most of these at least made some sense, while many others were even worse than the Erroneous Biddie.

Then in 1987 Dennis Paulson and Sidney Dunkle got together and coined English names for all North American species. It was circulated a little bit, but unpublished. In 1989 a new group was formed – the Dragonfly Society of the Americas! Paulson and Dunkle revised their list, and brought it to the meeting of the DSA in Silver City in 1995. While there was some resistance (as mentioned above) the growing consensus was that we needed an approved list. The DSA created a "Common Names Committee", and I was one of half-a-dozen or so people who helped review the Paulson/Dunkle list. Comments and suggestions were made, but the list remained 98 percent the Paulson/Dunkle list – with their hard work at getting at names that made sense either from geography of physical appearance. The final list was approved, and appeared in the DSA newsletter, ARGIA, Volume 8 (2), 1996.

That list got expanded to a very useful publication, "A Checklist of North American Odonata: Including English Name, Etymology, Type Locality, and Distribution", originally published as Occasional Paper No. 56 of the Slater Museum of Natural History, University of Puget Sound, in 1999. It has been revised in 2009, 2011, 2012, 2016, 2018 and 2021. It can be viewed and/or downloaded at the Odonata Central website at: https://www.odonatacentral.org/public/media/uploads/files/NA_Odonata_Checklist_2021_update.pdf.

Just to show how useful and interesting it is, let me insert an example from it to show the type of information given for each of the 471 species known from North America.

***Calopteryx* Leach—Jewelwings**

Calopteryx Leach, 1815: 137
Sci Name: beautiful wing
Eng Name: many species have iridescent wings.
Generotype: Libellula virgo Linnaeus, 1758

***Calopteryx aequabilis* Say—River Jewelwing**
Calepteryx [sic] *aequabilis* Say, 1839: 33
TL: Massachusetts
Sci Name: equal, probably referring to the cerci being of almost equal in diameter for their entire length
Eng Name: typically inhabits larger rivers than other members of genus Range: British Columbia and Northwest Territories to Newfoundland, south to California, Colorado, Indiana and Virginia

So, damselflies and dragonflies have now joined the community of birds, which have had approved English names for many years, established by committees of the American Ornithological Society. Interestingly, since common, English names were approved for Odonates, many birders have gotten into viewing, identifying and photographing dragonflies and damselflies! Furthermore, publications for the "general public" about this group have proliferated both in print and on the web.

Bob Glotzhober, Curator Emeritus of Natural History,
Ohio History Connection
University Press. Ithaca, NY. 829pp

Any Ode Answer – Maturation Rates.

Q. Do different damselfly and dragonfly species mature at different rates? I read somewhere that "the average dragonfly matures in a single year." What is the extent of variability beyond the "average?"

A. By Bob Glotzhober:

The simple answer: Yes – maturation rates of Odonata vary significantly, and at different levels.

First, eggs develop differently for various species. Many species lay eggs the have "direct" development, and may hatch between 1 to 8 weeks (Philip Corbet, 1999, "Dragonflies: Behavior and Ecology of Odonata"). For many of these, 10 to 14 days for hatching is common, but as noted, it can be much longer. Egg development in such species varies also by temperature and oxygen levels in the water. So, eggs laid in warm sunny spots, in flowing water (carries more O2), and eggs laid on or in photosynthesizing plants may develop faster.

Then there is a smaller group that show “delayed” egg development. Corbet (1999) lists especially Spreadwing Damselflies, Mosaic Darners, Emeralds (Somatochlora) and Meadowhawks. Some of these lay their eggs in plant tissues above the water. The Spotted Spreadwing (Lestes congener) oviposits in dry sedges several centimeters above the water, and the eggs don’t hatch until snowmelt or spring floods and warmth break the eggs’ diapause. The Fawn Darner (Boyeria vinosa) oviposits in roots or logs overhanging streams and waits for spring floods for the eggs to hatch. Years ago, famed Columbus Metro Parks aquatic biologist Mac Albin had a Fawn Darner twice try to lay eggs in his tanned arms while he was noodling for mussels! [Not productive!] Another cause for delayed egg hatch other than winter weather is extended dry season – and a variety of species in areas where such is common diapause eggs until the wet season comes.

Then comes the length of time for larval development. In Dragonflies of North America (Needham, Westfall, and May 2000), they state that “...there seems to be one brood a year in most temperate zone species…” They make it clear, however, that this is a “typical” and not the whole story by far. A few species can develop very quickly. Larval Span is only 50 days for the Wandering Glider (Pantala flavescens), 59 days for the Eastern Pondhawk (Erythemis simplicicollis), and 78 Days for the Eastern Forktail (Ischnura verticalis). That means that these species (and other similar ones) often have more than one brood per summer season. In fact, the Wander Glider may have 3 generations per year in tropical India. The Blue Dasher (Pachydiplax longipennis), Eastern Pondhawk and Eastern Forktail commonly have 2 generations per year in Ohio. Then again, the Blue Dasher may have only one generation per year, or may delay development and take two years for one generation if environmental conditions are poor! This is referred to as “plastic behavior”, and is a great survival trait when conditions are less than favorable.

Finally, some of the larger dragonflies develop much slower. My studies of the Tiger Spiketail (Cordulegaster erronea, both under field and lab conditions) showed that the larvae spend either 3 or sometimes 4 years before emerging as adults. The Federally Endangered Hine’s Emerald (Somatochlora hineana) takes 3 years according to studies. The all-time reported record is for the Nepal’s Spiketail (Anatogaster nipalensis) that lives in high mountain streams of Nepal. These glacial fed streams are very cold, and very low in nutrients, and this Spiketail requires ten years for development before the larva becomes an adult!

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Editor’s notes: Many thanks to David and Bob for their comprehensive explanations. Submit **Any Ode Question** or **Any Ode Answer** to lundbergj@hotmail.com. If you would prefer your submission remains anonymous, make note of that.

Any Ode Question – Capture and Release Nymphs

Q. What are considerations for capturing nymphs including ethics, techniques and tools?

2022 Ohio Odonata Survey, 2/21/2023 Jim Lemon jlem@woh.rr.com

Final numbers on 2022. Additional submissions will be noted at year-end of 2023.

For 2022, we have 35,512 research grade (RG) observation submitted to iNaturalist.

This set of observations represents 136 species, from 1,045 contributors. There were 127 New County Records.

County Data

88 Counties	*# Observations*	*# Sp*	*# Users*	*# Days*	*New High*	*# Co Records*
Adams	109	34	23	27		0
Allen	71	24	6	16		1
Ashland	250	37	14	31	o/s/d	0
Ashtabula	2375	67	20	148	o	0
Athens	111	34	21	34		0
Auglaize	67	23	2	6		3
Belmont	393	27	2	7	o/s/d	2
Brown	74	32	6	6		0
Butler	618	41	51	108		1
Carroll	106	27	6	14		1
Champaign	1297	68	42	73	s	1
Clark	856	59	25	74	o/s/d	3
Clermont	385	51	43	116	d	2
Clinton	112	30	12	23		0
Columbiana	159	46	11	20	o/s/d	6
Coshocton	1410	58	14	116	o/s/u	3
Crawford	117	34	6	33	d	3
Cuyahoga	765	52	101	138	u/d	0
Darke	217	46	7	25		1
Defiance	56	21	6	9		0
Delaware	275	38	45	64		1
Erie	268	30	24	68	o/d	0
Fairfield	138	31	22	26		1
Fayette	168	32	5	15		2
Franklin	2342	62	118	144	s	1
Fulton	214	30	6	23	o/u/d	0
Gallia	141	25	7	14	d	0
Geauga	551	69	41	91		1
Greene	745	64	62	108	u/d	1
Guernsey	126	23	3	5		0
Hamilton	725	56	68	121	o	1
Hancock	392	60	19	83	d	3
Hardin	85	32	3	18		1

Harrison	274	38	5	24	o/d	3
Henry	315	34	6	17	o/s/d	1
Highland	76	28	13	17	d	0
Hocking	121	36	24	30		0
Holmes	207	30	9	28	o/s	1
Huron	340	29	5	31	o/s/d	3
Jackson	120	31	8	18		0
Jefferson	231	34	7	26	o/s/u/d	3
Knox	156	22	17	22	u	0
Lake	605	68	46	83		1
Lawrence	231	38	4	10	o/s	2
Licking	198	34	25	43		1
Logan	401	47	16	46	o/d	2
Lorain	753	49	38	112		1
Lucas	3013	76	75	169	o/u/d	1
Madison	240	34	15	22		3
Mahoning	105	42	10	48		1
Marion	329	30	8	9	o	4
Medina	216	44	31	63		2
Meigs	381	31	1	4	o	3
Mercer	93	22	3	7		2
Miami	485	54	21	23	o/s/u	0
Monroe	187	28	2	5	o	2
Montgomery	1211	79	50	123	o/s/d	3
Morgan	144	32	7	13		2
Morrow	491	31	15	24	o/s/u/d	1
Muskingum	201	34	9	26	d	0
Noble	372	27	7	9	o/s/d	0
Ottawa	185	31	50	56	s/u/d	5
Paulding	59	21	2	4		0
Perry	94	21	1	24		1
Pickaway	124	34	16	24		3
Pike	267	40	9	14	o	3
Portage	487	76	56	84	s	3
Preble	230	36	12	20		3
Putnam	125	23	1	7		0
Richland	138	30	15	27		1
Ross	114	34	13	16		0
Sandusky	254	42	11	36	o/s	4
Scioto	117	33	9	15		3
Seneca	287	31	7	12	o	3
Shelby	139	34	15	13	u	5
Stark	2765	77	46	129	o/s/u/d	4

Summit	1125	73	111	134	s	0
Trumbull	140	39	10	28		1
Tuscarawas	192	29	6	15	o	1
Union	331	28	10	23	o	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	o/s	1
Williams	151	38	5	7		1
Wood	157	33	27	43	u	2
Wyandot	80	29	12	16		0

The "New High" column highlights those values where 2022 is now the top: o for # of observations, s for # of species, u for # of users, and d # of days. Note that Stark, Jefferson, and Morrow set new highs for all of these metrics.

Species Data

136 Species	***# Observations***	***# Counties***	***# Users***	***# Days***	***New Highs***	***# Co Records***
Amber-winged Spreadwing	63	15	21	26		1
American Rubyspot	593	38	76	114	o/u/d	0
Arrow Clubtail	20	7	9	14		0
Arrowhead Spiketail	19	10	14	12	u	1
Ashy Clubtail	102	19	28	34	o/u/d	0
Aurora Damsel	44	15	22	22	d	1
Autumn Meadowhawk	1352	72	162	134	o/c/d	0
Azure Bluet	313	54	75	83		1
Band-winged Meadowhawk	126	16	37	51	u	2
Banded Pennant	114	20	24	44		2
Beaverpond Baskettail	2	1	1	1		0
Black Saddlebags	544	73	100	121	o/u	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	2491	88	280	135		0
Blue-faced Meadowhawk	208	22	46	61		2
Blue-fronted Dancer	971	80	122	116	o/d	0
Blue-ringed Dancer	344	42	46	77		0

Blue-tipped Dancer	690	71	89	84	o	1
Brown Spiketail	15	4	5	7	c	0
Calico Pennant	386	52	71	86		0
Carolina Saddlebags	208	41	62	69		2
Cherry-faced Meadowhawk	2	1	2	1		0
Citrine Forktail	165	33	35	70		3
Clamp-tipped Emerald	9	8	8	8	c	0
Cobra Clubtail	59	4	22	20		0
Comet Darner	104	32	36	44	o	6
Common Baskettail	39	19	24	16		1
Common Green Darner	517	70	122	157		0
Common Sanddragon	17	4	4	5	o/c	0
Common Whitetail	1760	88	295	142	o	0
Cyrano Darner	43	21	21	27	o/c/u/d	3
Delta-spotted Spiketail	8	2	3	4		0
Dot-tailed Whiteface	213	32	38	44	o/c/d	3
Double-ringed Pennant	6	1	1	1		0
Double-striped Bluet	680	71	74	126		0
Dragonhunter	72	19	30	36		1
Dusky Clubtail	28	4	7	10	o/d	0
Dusky Dancer	266	46	43	70	o	0
Eastern Amberwing	1591	88	171	119	o/u	0
Eastern Forktail	2293	88	173	169	u	0
Eastern Least Clubtail	48	8	13	17	o/c	0
Eastern Pondhawk	2477	88	263	143	o	0
Eastern Red Damsel	193	20	45	47	o/c/u	1
Eastern Ringtail	21	4	7	10	c	0
Ebony Jewelwing	1122	77	292	107	o	1
Elegant Spreadwing	66	20	23	32	o/c/d	1
Elfin Skimmer	82	1	18	21	o	0
Elusive Clubtail	13	1	4	7	o/u/d	0
Emerald Spreadwing	79	17	29	28	o/u	0
Familiar Bluet	884	79	107	150	o/c/u/d	0
Fawn Darner	42	20	25	31	u	0
Flag-tailed Spinyleg	92	21	19	35		1
Fragile Forktail	1922	88	177	170	o/u	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	61	15	30	29	o/d	2
Great Blue Skimmer	174	32	45	64	o/d	7
Great Spreadwing	119	25	50	56	c/u	1
Green-faced Clubtail	14	1	4	4	o/u/d	0

Green-striped Darner	9	6	8	9		0
Halloween Pennant	483	71	117	87		0
Handsome Clubtail	17	6	7	11	c/u/d	1
Harlequin Darner	24	3	8	7	o	0
Jade Clubtail	26	4	11	4	o/c/u	2
Lance-tipped Darner	4	4	4	4		0
Lancet Clubtail	240	38	37	51	o/d	1
Laura's Clubtail	2	2	2	2	c	0
Lilypad Clubtail	1	1	1	1		0
Lilypad Forktail	102	8	22	29	u	0
Little Blue Dragonlet	1	1	1	1		1
Lyre-tipped Spreadwing	8	2	5	7	u	1
Macromia Hybrid	8	5	6	5	u	2
Midland Clubtail	89	18	23	29		2
Mocha Emerald	9	7	5	8		1
Northern Bluet	3	2	3	2	c	0
Northern Spreadwing	1	1	1	1		1
Ocellated Darner	12	4	6	6	o/c/u/d	1
Orange Bluet	585	72	70	125	o/d	1
Painted Skimmer	291	42	77	60	o/c/u/d	7
Paiute Dancer	65	4	17	18	c	0
Plains Clubtail	38	1	7	17		0
Powdered Dancer	747	56	95	101	o/d	0
Prince Baskettail	386	76	65	87	u	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	o/u/d	2
Riffle Snaketail	3	1	3	3		0
River Bluet	9	1	7	4	o/u/d	0
River Jewelwing	1	1	1	1		0
Royal River Cruiser	55	31	29	40	c/u/d	3
Ruby Meadowhawk	19	8	9	13		1
Russet-tipped Clubtail	54	3	11	22	o/u/d	1
Rusty Snaketail	24	4	9	11	o/c/d	0
Sedge Sprite	76	13	22	27	o/c/u/d	2
Seepage Dancer	197	5	34	39	o/c/u	0
Shadow Darner	146	33	63	67	o/u/d	1
Skimming Bluet	478	64	65	109	o	1
Slaty Skimmer	782	68	108	105	o/c	5
Slender Baskettail	2	2	2	2		1
Slender Spreadwing	581	67	89	111	o/c	0

Smoky Rubyspot	58	4	5	18		0
Southern Pygmy Clubtail	5	3	4	4	c	1
Southern Spreadwing	8	6	7	7		1
Spangled Skimmer	167	41	45	52	c	5
Spatterdock Darner	17	8	13	13		0
Sphagnum Sprite	74	8	21	24	o/u	0
Splendid Clubtail	11	2	7	7	d	0
Spot-winged Glider	55	19	23	27		0
Spotted Spreadwing	98	22	28	38	o/c	2
Springtime Darner	24	14	17	15	u	1
Stream Bluet	611	64	78	94	o/u	0
Stream Cruiser	18	5	7	7	o	1
Swamp Darner	70	30	49	39		4
Swamp Spreadwing	61	21	22	36		3
Sweetflag Spreadwing	54	22	27	36	o/u/d	2
Swift River Cruiser	52	21	20	34		0
Swift Setwing	52	7	10	21	o/c	2
Tiger Spiketail	6	5	5	5	u	0
Tule Bluet	48	10	11	25	c	0
Turquoise Bluet	105	17	20	27		2
Twelve-spotted Skimmer	511	63	123	97		0
Twin-spotted Spiketail	3	3	3	3		1
Uhler's Sundragon	6	1	1	1	o	0
Unicorn Clubtail	311	51	70	47	o/d	1
Vesper Bluet	109	23	22	45	o/c/d	4
Violet Dancer	1123	77	108	118	o/d	0
Wandering Glider	205	45	70	72	u	3
Westfall's Slender Bluet	332	49	60	57	o/u	4
White-faced Meadowhawk	24	7	12	18	c/u	1
Widow Skimmer	1606	88	232	126		0
Yellow-sided Skimmer	30	1	3	4	o	0

"New High" highlights those values where 2022 is now the top # of observations, # of counties, # of users, and # of days

Note that Cyrano Darner, Familiar Bluet, Ocellated Darner, Painted Skimmer, and Sedge Sprite set new highs for all of these metrics. Note also that Painted Skimmer had 7 new County Records.