

Newsletter of the Ohio Odonata Society

Ohio Dragon Flyer



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Cover Photo: Red Saddlebags *Tramea onusta*

Clermont County, Ohio, 9 September 2022, David Tibbets

Sony A74, FE 200-600 @600mm, 1/1000, f/8.0, ISO 1000, +1 EV.

The Season so Far Jim Lemon jlem@woh.rr.com

September was good month, once again a bit behind 2019 numbers, but very good. So far on the year, we have over 32,000 research grade (RG) observation submitted to iNaturalist, now only trailing 2019 by about 300 observations. This represents 135 species. The top reported species Eastern Pondhawk, Blue Dasher, Eastern Forktail, Common Whitetail, and Fragile Forktail.

Eastern Pondhawk and Autumn Meadowhawk led species numbers for September with 200+ observations each. Eastern Forktail, Fragile Forktail, Familiar Bluet, Eastern Amberwing, American Rubyspot, and Slaty Skimmer all had over 100 observations in September.

Notable finds in September: Ocellated Darner in several locations.

Hopeful species for October: Striped Saddlebags, Variegated Meadowhawk.

Also, please get your photo observations submitted to iNaturalist. Please contact me with questions or concerns.

Little Miami River September 1-2 Trip Report

Early Thursday, Jim Heflich and Sally Isacco began the 4-hour drive from NE to SW Ohio, collecting Dave Hochadel along the way. They arrived at Otto Armleder Park in Hamilton County just after noon and met up with Jim Lemon, Ken Lebo and Jim Lundberg, the main focus of the trip to observe later-season Clubtails in the lower section of the Little Miami River – specifically Russet-tipped Clubtail, Eastern Ringtail, Arrow Clubtail and Elusive Clubtail.

August had dealt double the normal amount of precipitation along with associated wind and cloud cover, but Thursday, September 1, broke calm and sunny with Black Saddlebags, Common Green Darners, Wandering Gliders and Carolina Saddlebags overflying the fields. The Little Miami River level, as measured at nearby Milford, had recently dropped to five feet which is ideal, but whether the Clubtails would cooperate following such a wet August was anyone’s guess. After greetings between old friends and introductions to new, the intrepid adventurers headed to the river. The brush just downriver from Otto’s north beach held abundant later-season damselflies – American Rubyspots, Powdered Dancers and Blue-fronted Dancers.



Back row, left to right: Jim Lundberg, Ken Lebo, Jim Heflich, Jim Lemon and Dave Hochadel. Front: Sally Isacco.



Patrolling out over the river were Prince Baskettail, Swift River Cruiser and, yes, Clubtails. Russet-tipped Clubtail was a lifer for Jim H. Eastern Ringtail was a lifer for Jim H, Sally and Dave. An Elusive Clubtail made a brief appearance, photographed by Ken, and a lifer for him. A Royal River Cruiser was identified but not photographed. Mid-afternoon clouds developed, and flight activity slowed.

After a local hotel overnight, Sally, Dave and Jim H returned to Otto around 8:45. It was partly cloudy and early in the day for flight activity, but the group was rewarded almost immediately with a Russet-tipped Clubtail found hanging in the low vegetation along the north beach. They found four more roosting Russet-tipped Clubtails in rapid succession, a highlight before the long drive home. New bugs. New friends. Success.



Russet-tipped Clubtail *Stylurus plagiatus*
September 2022, Hamilton County, Ohio. Photo: Dave Hochadel

Baskettails – Knowns/Unknowns Sally Isacco disacco@roadrunner.com | Jim Lemon jlem@woh.rr.com

In previous articles we've talked about naturally occurring variation in Odonata populations, possible hybrids, and developmental changes in morphology. These factors all contribute to complicating the identification process, or rendering an observation unacceptable for ID to species. This is especially so with identifying the small Baskettails. So, consider this an apology and explanation on why your Baskettail observations may be just sitting.

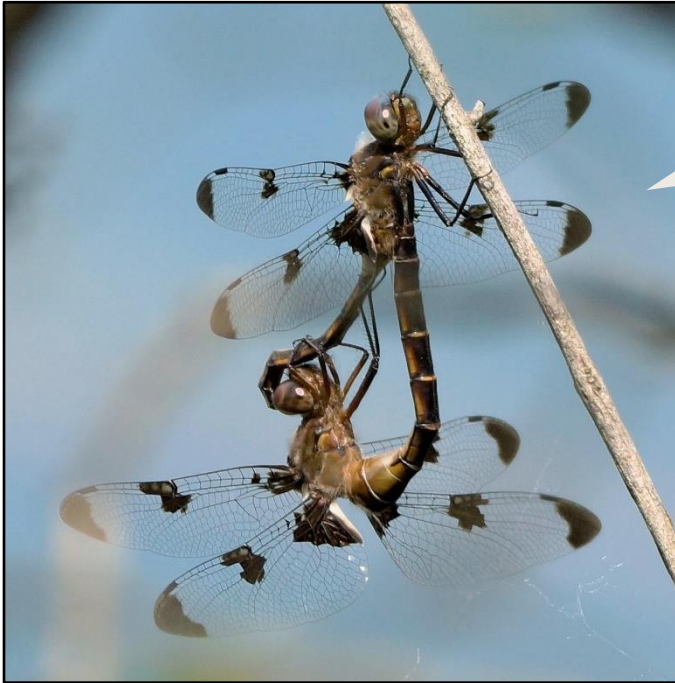
Before we get to the small species, first note that the Baskettail you're most likely to observe is **Prince Baskettail** *Epithea princeps*. Prince is considerably larger than the other Baskettails, bigger than many of the Skimmers, but smaller than the Darners. As an Emerald, Prince has green eyes in the sunshine and typically has wing markings that make it easy to ID. Males fly long patrols over open water and are a common sight at wetlands almost anywhere in Ohio. Our iNaturalist observations of Prince are 10x greater than the other Baskettail species combined. Prince is known from every county; there are recent observations in all counties except Holmes. Prince flight is June through August. Given the prominent field marks, most Prince photos can be identified. Typical sights of Prince Baskettail, note the eyes and wing pigmentation.



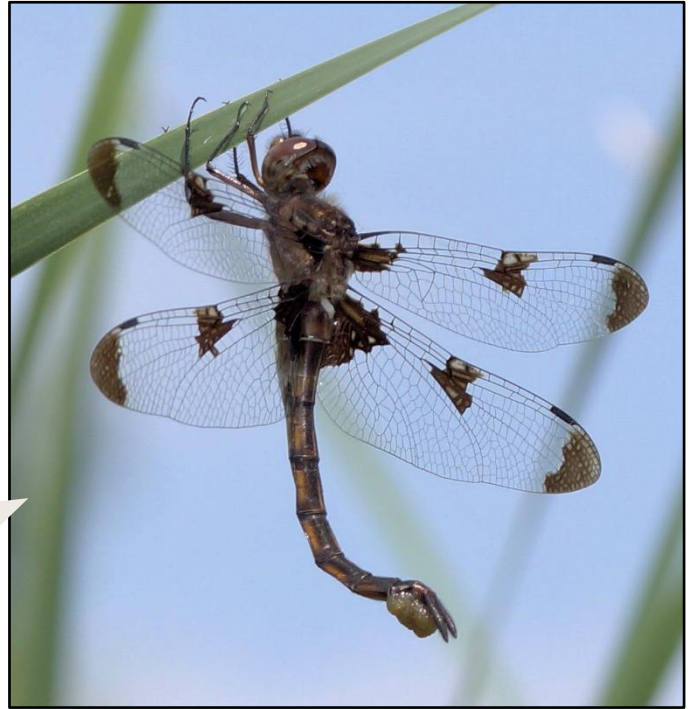
Prince Baskettail *Epithea princeps*, In Flight Greene Co, July 14 2016. Jim Lemon

Prince Baskettail *Epithea princeps* In Flight, Darke Co, Jul 8, 2018, Jim Lemon.





Prince Baskettail *Epitheca princeps*, Mating Pair, Champaign Co, Jun 5, 2019, Jim Lemon.



Prince Baskettail *Epitheca princeps*. Female with egg mass, and characteristic hook of the abdomen, Miami Co, Jul 14, 2019, Jim Lemon.

The small Ohio Baskettail (*Epitheca*) species include Common *E cynosura*, Beaverpond *E canis*, Slender *E costalis*. All are medium sized, dark-colored non-metallic dragonflies with dull yellow spots on the lateral abdomen. Eye color starts out brown changing to green/blue when mature. All the small Baskettails seem to present a range of wing spots, dimensions of the abdomen, and male appendages. Beaverpond may be the easiest to consider. It flies early and only in the far northeast counties. It also has distinctive male terminal appendages if they can be seen. Note that these species are very similar and challenging to ID even with good photos.



Beaverpond Baskettail *Epitheca canis* has a very early flight, from April to a peak in May. Beaverpond Baskettails are one of the earliest to emerge in the spring. Known from the 6 most north-easterly counties.

Beaverpond Baskettail *Epitheca canis*, Male, Lake Co, May 10, 2008, Sally Isacco.



Beaverpond Baskettail *Epitheca canis*. Male cerci detail, Lake Co, May 10, 2008, Sally Isacco. Note the distinctive male appendages, claspers pointing down at the end.

Beaverpond Baskettail *Epitheca canis*, Male, Lake Co, May 15, 2022, Sally Isacco.





Slender Baskettail *Epitheca costalis* also has an early flight. But not quite as early as Beaverpond Baskettails. Based on our limited data, the Ohio flight peaks in late May. Slender Baskettails are recorded in 8 counties. Males have constriction at S3, and are generally less stout than other Baskettails. Male appendages appear longer and straighter than Common.

Slender Baskettail *Epitheca costalis* Male, Preble Co, May 30, 2022, Rick Asamoto.

Slender Baskettail *Epitheca costalis* Male, Crawford Co, Jun 4, 2020, Chelsea Gottfried.

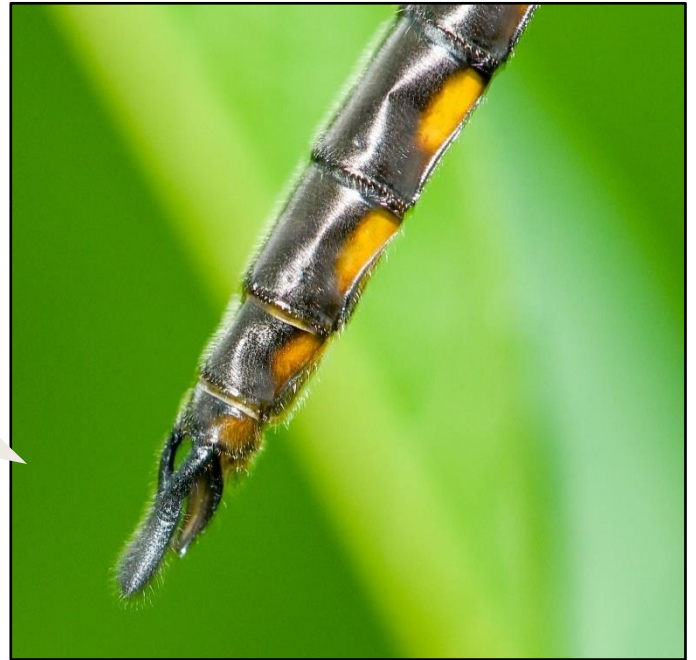


Slender Baskettail *Epitheca costalis* Male, Crawford Co, Jun 4, 2020, Chelsea Gottfried.



Slender Baskettail *Epitheca costalis* Male, cerci detail, Preble Co, May 30, 2022, Rick Asamoto.

Slender Baskettail *Epitheca costalis* Male, cerci detail. Crawford Co, Jun 4, 2020, Chelsea Gottfried.



Slender Baskettail *Epitheca costalis* Male cerci detail, Preble Co, May 30 2022, Rick Asamoto.



It was long considered that Common Baskettail was the most prevalent of the small Baskettails. Our OOS database has many historical records of *E. cynosura*. This idea has been challenged by Nick Donnelly and others who see signs of potential hybridization and what is characterized as "integrades" in Common and Slender. To complicate it a little more, western Ohio is considered very near the center of the range of these integrades. Field guides discuss the relative dimensions of the abdomen and focus on the male appendages. The reality, especially in photos, is that the described characteristics and what can be seen are such that an observation can appear to be both or neither species. We do not have a defined *Epitheca cynosura* x *costalis* hybrid, or an "Epitheca Integrate". If we did, this is likely where many of our nearly 800 unidentified Baskettail observations would fit.



Common Baskettail *Epitheca cynosura* flies later and longer than other small Baskettails – into July, with June peak. Likely anywhere in the state. ID of Common Baskettails can be sometimes be identified by the elimination of Beaverpond Baskettail and Slender Baskettail.

Common Baskettail *Epitheca cynosura* Male, Shelby Co, May 14, 2021, Jim Lemon.



Common Baskettail *Epitheca cynosura* Male, Wyandot Co, May 27, 2019, Jim Lemon.



Common Baskettail *Epitheca cynosura* Male, Ashtabula Co, Jun 7, 2020, Jim Lemon

Female – no constriction of “waist”, yellow dorso-lateral markings rectangular. Short superior appendages. Back of head dark. Wing pigmentation at base. Note egg mass. When deposited in water, the mass unwinds to long strand.

Common Baskettail *Epitheca cynosura* Female, Warren Co, May 23, 2018, Jim Lemon. Note short appendages.



Common Baskettail *Epitheca cynosura* Female with egg mass, Champaign Co, May 29, 2019, Jim Lemon.



Common Baskettail *Epitheca cynosura* Female, Female in flight with egg mass, Champaign Co, Jun 4, 2015, Jim Lemon.

Male – cerci like ‘dog-tail wagging’. Like Slender, no spike on the underside of the upper male appendage.

Common Baskettail *Epitheca cynosura* Male, cerci detail, Paulson Co, June 24, 2020, Jim Lemon.

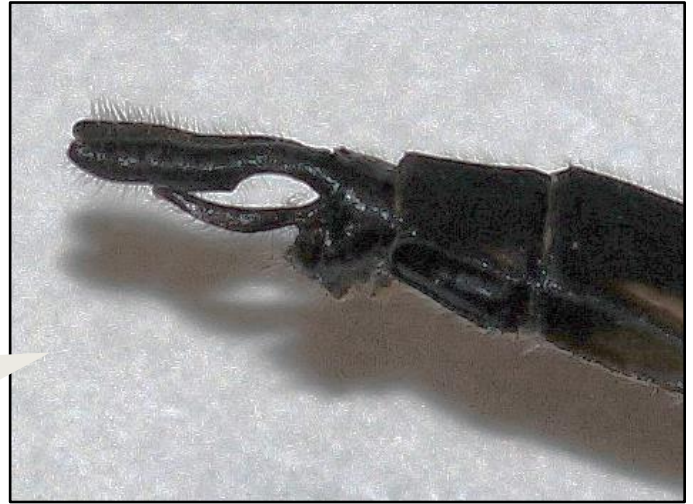


Common Baskettail *Epitheca cynosura* Male, cerci detail, Adams Co, May 2, 2020, Jim Lemon.



Common Baskettail *Epitheca cynosura* Male, cerci detail, Paulding Co, Jun 24, 2020, Jim Lemon.

Common Baskettail *Epitheca cynosura* Male, cerci detail, Shelby Co, May 24, 2021, Jim Lemon.



We could add **Spiny Baskettail** *Epitheca spinigera*, as it has been reported in neighboring states, but we're still waiting for it to be found here. There was enough confidence in finding Spiny that it was included in Glotzohober and McShaffrey "The Dragonflies and Damselflies of Ohio" (2002). Alas, still searching – refer to that publication for description of Spiny Baskettail.

Flight Photos – Customization

Before customizing modes, buttons and dials, gather information. Develop separate profiles for flight photos and static subject photos. Profiles list exposure mode, autofocus mode drive mode, initial settings and acceptable ranges for aperture, shutter speed and ISO. Comparing image metadata between photos is helpful and a continuing process. On the internet, search: *Birds in flight settings [your camera]*. Reference previous articles in the Flight Photo series. The examples illustrate customization for three profiles; optimum profile settings vary with cameras, lenses and personal preferences.

Flight Photo Profile: Exposure mode – Shutter-Priority (Tv), autofocus mode – Tracking, drive mode – Low-speed Continuous, metering – Evaluative, aperture – N/A, shutter speed – 1/2000, ISO – 1000, ISO range – ISO 800 to 3200, aperture range – *f*8.0 to *f*16, Safety Shift – ISO.

Static Subject Profile: Exposure mode – Aperture-Priority (Av), autofocus mode – One Shot, drive mode – Single Shot, metering – Partial, aperture – *f*11, shutter speed – N/A, ISO – 640. Shutter Speed range – 1/250 to 1/2000, ISO range 200 to 3200. Safety Shift – ISO.

Walkabout Profile: Exposure Mode – Manual (M) with Auto ISO, autofocus mode – Tracking, drive mode – Low-speed Continuous, metering – Partial, aperture – set for conditions, shutter speed – set for conditions, ISO – Auto, ISO range – 800 to 3200, aperture range – N/A. Shutter range – N/A. Safety Shift – N/A.

Range Limits

Without user-defined limits, camera and lens capability determines limits – for example, a user-defined limit of ISO 3200 versus a camera limit of ISO 51200. Narrow range limits force autoexposure progression before allowing subject blur, image noise and soft focus. Different profiles will have different range limits. For example, the Flight Photo Profile has a higher minimum shutter speed limit to minimize subject blur, and the Static Subject Profile has a smaller minimum aperture limit to allow deeper depths of field.

Autoexposure Logic.

Exposure mode, range settings and safety shift determine the progression of autoexposure logic – in that order. The three profile examples illustrate three paths of autoexposure logic progression:

Flight Photo Profile: Shutter-Priority (Tv), shutter speed is set at 1/2000. Aperture is active within the preset range of *f*7.1 to *f*16 to obtain standard exposure. Reaching either aperture range limit, the Safety Shift selection (ISO) becomes active to obtain standard exposure within the preset range of ISO 800 to 3200. Reaching either ISO range limit, photographer intervention is required to obtain standard exposure.

Static Subject Profile: Aperture-Priority (Av), aperture is set at *f*11. Shutter speed is active within the preset range of 1/250 to 1/2000 to obtain standard exposure. Reaching either shutter speed limit, the Safety Shift selection (ISO) becomes active to obtain standard exposure within the preset range of ISO 200 to 3200. Reaching either ISO range limit, intervention is required to obtain standard exposure.

Walkabout Profile: Manual (M) with auto ISO, aperture and shutter speed remain as set. ISO is active to obtain standard exposure within the preset range of 400 to 3200. Reaching either ISO range limit, intervention is required to obtain standard exposure.

Intervention

Narrow range limits provide protection from subject blur, image noise and soft focus but often limit proper exposure. Exceeding all range limitations requires user intervention. User intervention is often preferable to full automation, because the photographer is capable of situational evaluation. When an exposure warning is flashing, we have four choices: Adjust aperture, shutter speed or ISO or adjust nothing at all. If the dragonfly is patrolling along the opposite streambank, and the image will require heavy cropping, we don't want to increase ISO, but depth of field is probably not an issue, so we increase aperture. Tracking a close subject, some increased noise may be preferable over a shallow depth of field or subject blur, so increase ISO. Panning a slow-moving subject, reducing shutter speed may be the best option. There is some latitude in bringing detail out of shadows and highlights when shooting RAW images, and we may decide to adjust nothing.

Custom Shooting Modes

Custom shooting modes register multiple settings to create a profile which we recall with the turn of a dial. Practically, any selectable setting can be registered to a custom shooting mode. Most cameras will have two or three custom shooting mode dial positions; consider dedicating one to a flight photo profile and another to a static subject profile.

The first programming step is to select the desired exposure mode (Av, Tv, or M). There is no required sequence for programming the rest of the settings; in no particular order: Dial in optimum aperture, shutter speed and ISO; dive into the menu and set image quality, autofocus mode, drive mode, and metering mode; set aperture range, shutter speed range and ISO range if applicable; select Safety Shift and Auto ISO if applicable; select other preferred settings. The last step is to register the settings to a custom shooting mode.

After taking your customized camera to the field, you may determine a need to widen or narrow one or both range limits or adjust the initial setting. For example, if your preset shutter speed is 1/2000 but you habitually change it to 1/2500, then dive into the menu and register it to the custom shooting mode.

Dials and Buttons

Exposure Triangle: Your camera may already have three dials assigned to the three points of the exposure triangle – aperture, shutter and ISO. If you have selected Safety Shift ISO for your custom shooting modes, you might consider reassigning the ISO dial to Exposure Compensation. With familiarity, you can make adjustments on the fly. These

adjustments will not create permanent changes to your custom shooting mode. Some cameras will return to the preset after an interval of metering inactivity. That timeout interval may be adjustable. Other cameras latch the setting change only until selecting a new setting, changing shooting modes or turning off the camera.

Back Button Focus: Separating the functions of shutter release and focus isn't favored by every wildlife photographer, but it does offer advantages. For static subject photos, it allows image composition while maintaining a desired point of focus such as on a damselfly eye. It also gives the photographer more control over the exposure triangle and metering. For flight photos, it facilitates focus tracking between shutter releases. To set up back button focus, first, change the shutter button half-press from Metering and AF start to Metering start. There may already be a button on the back of the camera assigned Metering and AF start. If not, then customize one that you don't use for another function. You could even reassign three back buttons to Metering and AF start, each with a separate autofocus method, from left to right: point focus, zone focus and full field of view focus with eye detect. The point focus, would be used for still photos, the zone focus for flight photos with a busy background and the full FOV focus for flight photos with a clean background. In practice, place your thumb on a back button to activate Metering and AF and the index finger lightly on the Shutter button. Press and hold the back button about once a second until subject focus is captured then keep the back button focus pressed for as long as the camera holds focus lock. One strategy is to capture focus lock while the dragonfly is still distant but closing, then press the shutter release as the bug moves into desired range.

Other Settings

Electronic Viewfinder Settings: If you have a mirrorless camera, you have an electronic viewfinder. Enabling exposure simulation offers immediate and intuitive exposure feedback. If the viewfinder image is obviously too bright or too dark, the downloaded image will, similarly, be overexposed or underexposed. Either the autoexposure has reached all preset limits on aperture, shutter speed and ISO or the subject and background are unequally illuminated. For either issue, dial in a correction to aperture, shutter speed or ISO (or exposure compensation if in Auto ISO mode). Exposure simulation will immediately show the change. One last thing on EVFs, if the camera offers a choice in display performance, select the higher performance setting over a power saving setting for flight photos; it will be easier to track the bugs.

AF Tracking: Most cameras allow the user to select tracking sensitivity and acceleration/deceleration tracking. For those fast and erratic subjects of ours, select settings that continue to track subjects, ignoring obstacles – tracking sensitivity at the lowest rate and acceleration/deceleration tracking at the highest tracking rate.

After completing the process of configuring the camera for flight photos, keeper rate will improve, but the payoff might not be immediate; practiced familiarity with the customized dials, buttons and settings comes after taking thousands of photos. This is the last article in the Flight Photos series. Good Hunting!

September/October Odes – more goodbyes Jim Lemon jlem@woh.rr.com

Cool days and nights means fewer Odonata in the air, many done for the season. I had my first no-dragon day – and there will be more to come. Autumn Meadowhawks and Spreadwings can still be seen. Here's the set of species that were likely done for this season in September, and the list for October departures. Observations beyond the late date listed will constitute new late flight dates.

Species	Late	Observation Count All Data	Recent Years
Swamp Darner	1-Sep	499	334
Common Sanddragon	1-Sep	123	36
Unicorn Clubtail	2-Sep	1009	750
Tiger Spiketail	3-Sep	81	16
Riverine Clubtail	4-Sep	15	1
Eastern Red Damsel	6-Sep	804	501
Sedge Sprite	6-Sep	230	84
Spangled Skimmer	14-Sep	663	462
Amber-winged Spreadwing	16-Sep	464	281
Elfin Skimmer	17-Sep	352	250
Black-shouldered Spinyleg	18-Sep	421	226
Dragonhunter	18-Sep	298	204
Great Blue Skimmer	18-Sep	278	197
Rambur's Forktail	19-Sep	14	12
Banded Pennant	20-Sep	434	354
Swamp Spreadwing	20-Sep	380	214
Elegant Spreadwing	20-Sep	318	185
Laura's Clubtail	21-Sep	47	25
Westfall's Slender Bluet	22-Sep	1115	907
Yellow-sided Skimmer	22-Sep	59	48
Rainbow Bluet	24-Sep	370	122
Gilded River Cruiser	24-Sep	63	24
Ocellated Darner	25-Sep	36	6
Ebony Jewelwing	26-Sep	4725	3645
Royal River Cruiser	26-Sep	419	208
Blue-tipped Dancer	27-Sep	2363	1939
Paiute Dancer	27-Sep	234	223
Southern Spreadwing	27-Sep	229	80
Sweetflag Spreadwing	29-Sep	282	162
Elusive Clubtail	2-Oct	27	9
Seepage Dancer	3-Oct	639	457
Swift River Cruiser	3-Oct	563	238

Spot-winged Glider	4-Oct	308	177
Common Baskettail	6-Oct	603	165
Clamp-tipped Emerald	7-Oct	171	66
Slaty Skimmer	8-Oct	2441	2164
Flag-tailed Spinyleg	8-Oct	508	345
Band-winged Dragonlet	8-Oct	16	2
Violet Dancer	9-Oct	3851	2948
Arrow Clubtail	10-Oct	262	87
Macromia Hybrid	10-Oct	56	46
Marsh Bluet	10-Oct	66	7
Furtive Forktail	10-Oct	3	1
Halloween Pennant	13-Oct	2599	2160
Carolina Saddlebags	13-Oct	757	652
Striped Saddlebags	14-Oct	34	20
Lyre-tipped Spreadwing	15-Oct	164	40
Eastern Ringtail	17-Oct	82	74
Calico Pennant	19-Oct	1921	1386
Common Whitetail	20-Oct	6268	5111
Twelve-spotted Skimmer	20-Oct	2489	1783
Smoky Rubyspot	20-Oct	221	156
Russet-tipped Clubtail	20-Oct	162	83
Mocha Emerald	20-Oct	169	64
Black-tipped Darner	20-Oct	101	40
Cherry-faced Meadowhawk	21-Oct	12	1
Eastern Pondhawk	22-Oct	9204	7894
Eastern Amberwing	22-Oct	5602	4637
Skimming Bluet	22-Oct	1905	1518
Dusky Dancer	22-Oct	876	703
Vesper Bluet	22-Oct	371	253
Swift Setwing	22-Oct	228	181
Black Saddlebags	23-Oct	1875	1433
Blue-ringed Dancer	23-Oct	1596	1308
Red Saddlebags	23-Oct	86	31
Widow Skimmer	24-Oct	6947	5680
Prince Baskettail	24-Oct	1507	1170
Green-striped Darner	24-Oct	220	125
Band-winged Meadowhawk	25-Oct	642	398
Fawn Darner	25-Oct	351	154
Ruby Meadowhawk	25-Oct	903	88
White-faced Meadowhawk	26-Oct	238	101
Blue Dasher	27-Oct	8673	7320

Slender Spreadwing	28-Oct	2408	1588
Orange Bluet	28-Oct	1919	1534
Lance-tipped Darner	28-Oct	354	43
Blue-fronted Dancer	29-Oct	3784	3025

2022 Numbers To-Date – Species Jim Lemon jlem@woh.rr.com

135 Species	# Observations	# Counties	# Users	# Co Records	New Yearly High
Amber-winged Spreadwing	60	15	19	1	
American Rubyspot	492	35	68		*
Arrow Clubtail	19	7	9		
Arrowhead Spiketail	19	10	14	1	
Ashy Clubtail	91	18	27		*
Aurora Damsel	44	15	22	1	
Autumn Meadowhawk	544	59	104		
Azure Bluet	302	53	72		
Band-winged Meadowhawk	103	16	36	2	
Banded Pennant	110	20	24	2	
Beaverpond Baskettail	2	1	1		
Black Saddlebags	497	72	94		*
Black-shouldered Spinyleg	58	22	21	1	
Black-tipped Darner	7	3	5		
Blue Corporal	26	10	18	1	
Blue Dasher	2371	88	273		
Blue-faced Meadowhawk	150	22	40	1	
Blue-fronted Dancer	915	80	115		
Blue-ringed Dancer	320	41	45		
Blue-tipped Dancer	664	70	88	1	*
Brown Spiketail	15	4	5		
Calico Pennant	347	51	69		
Carolina Saddlebags	191	39	60	2	
Citrine Forktail	156	33	33	3	
Clamp-tipped Emerald	9	8	8		
Cobra Clubtail	58	4	21		
Comet Darner	95	31	35	5	

Common Baskettail	32	17	21	1	
Common Green Darner	458	68	114		
Common Sanddragon	17	4	4		~
Common Whitetail	1686	88	287		*
Cyrano Darner	43	21	21	3	*
Delta-spotted Spiketail	8	2	3		
Dot-tailed Whiteface	206	32	37	3	*
Double-ringed Pennant	6	1	1		
Double-striped Bluet	657	71	72		
Dragonhunter	71	19	30	1	
Dusky Clubtail	16	4	7		
Dusky Dancer	237	42	40		
Eastern Amberwing	1511	88	167		*
Eastern Forktail	2119	88	166		*
Eastern Least Clubtail	47	7	12		*
Eastern Pondhawk	2369	88	252		*
Eastern Red Damsel	187	20	44	1	*
Eastern Ringtail	21	4	7		
Ebony Jewelwing	1086	77	288	1	*
Elegant Spreadwing	57	19	22		
Elfin Skimmer	80	1	18		*
Elusive Clubtail	4	1	2		
Familiar Bluet	705	75	100		
Fawn Darner	40	20	25		
Flag-tailed Spinyleg	90	21	19		
Fragile Forktail	1733	88	170		
Furtive Forktail	1	1	1	1	
Gilded River Cruiser	7	4	4		
Golden-winged Skimmer	6	3	4	2	
Gray Petaltail	60	14	29	2	*
Great Blue Skimmer	168	32	43	7	*
Great Spreadwing	64	20	33	1	
Green-faced Clubtail	13	1	4		*
Green-striped Darner	7	5	6		
Halloween Pennant	465	69	113		
Handsome Clubtail	17	6	7	1	
Harlequin Darner	24	3	8		*
Jade Clubtail	26	4	11	2	
Lance-tipped Darner	4	4	4		

Lancet Clubtail	224	37	34	1	*
Laura's Clubtail	2	2	2		
Lilypad Clubtail	1	1	1		
Lilypad Forktail	101	8	22		
Little Blue Dragonlet	1	1	1	1	~
Lyre-tipped Spreadwing	5	2	4		
Macromia Hybrid	8	5	6	2	
Midland Clubtail	84	17	22	2	
Mocha Emerald	9	7	5	1	
Northern Bluet	3	2	3		
Northern Emerald Spreadwing	70	17	29		
Northern Spreadwing	1	1	1	1	
Ocellated Darner	12	4	6		*
Orange Bluet	549	69	67	1	*
Painted Skimmer	279	42	75	7	*
Paiute Dancer	65	4	17		
Plains Clubtail	34	1	6		
Powdered Dancer	683	56	89		*
Prince Baskettail	368	76	62		
Pronghorn Clubtail	16	5	10		
Racket-tailed Emerald	10	3	6		
Rainbow Bluet	22	6	10		
Rapids Clubtail	14	7	9	1	
Red Saddlebags	19	7	10	1	*
Riffle Snaketail	3	1	3		
River Bluet	9	1	7		*
River Jewelwing	1	1	1		
Royal River Cruiser	50	28	24	2	
Ruby Meadowhawk	19	8	9	1	
Russet-tipped Clubtail	49	3	11		*
Rusty Snaketail	23	4	9		*
Sedge Sprite	69	11	20	1	
Seepage Dancer	188	5	34		*
Shadow Darner	59	24	40		
Skimming Bluet	450	63	63	1	
Slaty Skimmer	758	66	106	5	*
Slender Baskettail	1	1	1	1	~
Slender Spreadwing	530	65	86		
Smoky Rubyspot	51	3	4		

Southern Pygmy Clubtail	5	3	4	1	
Southern Spreadwing	5	3	4	1	
Spangled Skimmer	164	41	44	5	
Spatterdock Darner	16	7	12		
Sphagnum Sprite	70	8	21		*
Splendid Clubtail	11	2	7		
Spot-winged Glider	54	19	22		*
Spotted Spreadwing	63	18	21	2	
Springtime Darner	24	14	17		
Stream Bluet	573	64	72		*
Stream Cruiser	18	5	7	1	*
Swamp Darner	69	29	48	4	
Swamp Spreadwing	58	21	21	3	
Sweetflag Spreadwing	45	18	23	1	
Swift River Cruiser	49	20	19		
Swift Setwing	51	7	10	2	~
Tiger Spiketail	6	5	5		
Tule Bluet	44	9	10		
Turquoise Bluet	97	15	18	1	
Twelve-spotted Skimmer	483	63	120		
Twin-spotted Spiketail	3	3	3	1	
Uhler's Sundragon	6	1	1		~
Unicorn Clubtail	287	51	65		*
Vesper Bluet	103	22	22	3	*
Violet Dancer	1031	77	105		*
Wandering Glider	195	43	67	3	
Westfall's Slender Bluet	316	48	58	4	*
White-faced Meadowhawk	20	5	10		
Widow Skimmer	1536	88	224		
Yellow-sided Skimmer	30	1	3		*

2022 To-Date Numbers – County Jim Lemon jlem@woh.rr.com

88 Counties	# Observations	# Sp	# Users	# Co Records	New Yearly High
Adams	104	34	22		
Allen	69	24	6	1	
Ashland	248	36	13		*
Ashtabula	1875	64	19		
Athens	94	31	18		
Auglaize	58	22	2	3	
Belmont	376	27	2	2	
Brown	73	32	5		
Butler	533	40	46	1	
Carroll	94	25	6	1	
Champaign	1214	68	39	1	
Clark	797	57	22	3	*
Clermont	360	47	42	1	
Clinton	108	30	12		
Columbiana	138	45	10	6	
Coshocton	1276	56	13	2	
Crawford	100	32	6	3	
Cuyahoga	706	52	93		
Darke	212	46	7	1	
Defiance	56	21	6		
Delaware	264	36	42		
Erie	249	30	21		*
Fairfield	128	28	19		
Fayette	162	28	5	2	
Franklin	2253	61	106	1	
Fulton	202	30	6		*
Gallia	90	22	7		
Geauga	528	69	38	1	
Greene	669	61	60		
Guernsey	124	23	3		
Hamilton	647	56	65	1	
Hancock	378	59	19	2	
Hardin	83	31	3	1	
Harrison	266	38	5	3	*

Henry	312	34	6	1	*
Highland	71	27	12		
Hocking	117	34	23		
Holmes	198	29	8	1	*
Huron	322	28	5	3	*
Jackson	103	31	8		
Jefferson	227	34	6	3	*
Knox	154	22	16		
Lake	560	68	42	1	
Lawrence	219	35	4	1	*
Licking	196	34	24	1	
Logan	397	46	16	2	
Lorain	726	47	36	1	
Lucas	2368	76	68	1	*
Madison	236	33	15	2	
Mahoning	99	42	10	1	
Marion	322	29	8	2	*
Medina	201	43	30	2	
Meigs	378	31	1	3	
Mercer	81	22	3	1	
Miami	469	53	21		*
Monroe	180	28	2	2	*
Montgomery	1159	76	49	3	
Morgan	144	32	7		
Morrow	480	30	15	1	*
Muskingum	197	34	9		
Noble	345	25	6		*
Ottawa	151	30	49	5	
Paulding	59	21	2		
Perry	93	21	1	1	
Pickaway	119	34	16	3	
Pike	267	40	9	3	*
Portage	431	75	49	1	
Preble	219	36	12	3	
Putnam	125	23	1		
Richland	136	30	15	1	
Ross	90	28	12		
Sandusky	227	40	11	3	
Scioto	114	32	9	1	

Seneca	281	30	7	3	*
Shelby	131	31	14	5	
Stark	2527	76	40	4	*
Summit	904	71	102		
Trumbull	134	38	10	1	
Tuscarawas	183	28	5	1	*
Union	313	26	9		
Van Wert	33	17	1		
Vinton	80	29	6		
Warren	212	44	31	1	
Washington	92	25	3		
Wayne	212	28	24	1	*
Williams	137	35	4	1	
Wood	140	32	26	2	
Wyandot	80	29	12		