

Ohio Dragon Flyer

The Newsletter of the Ohio Odonata Society



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Cover Photo Rick Nirschl: Vesper Bluet *Enallagma vesperum*.
 Metzger Marsh, Lucas County, Ohio, 7/15/2022
 1/250, f14, ISO400, Canon 7D II.

Flight Photos – Image Stabilization – OFF or ON?

Image Stabilization: Whether the camera maker calls it image stabilization or something else, it corrects for unintended camera movement – movement which is amplified by the longer lenses we use for dragonflies. Image stabilization is a good thing, allowing much slower shutter speeds for still shots like perched dragonflies. But how about flight photos – OFF or ON?

OFF – Many wildlife photographers prefer to turn IS off for flight photos, and their reasoning is valid and backed up with excellent results. Pros and Cons:

- Image stabilization is designed to counteract camera movement which is at conflict with intentional panning.
- Image stabilization takes computing power and slows focusing.
- Image stabilization consumes battery power.
- The fast shutter speeds we use to prevent subject blur also prevent vibration blur, so IS is not necessary.

ON – Many wildlife photographers prefer to leave IS on or turn IS to a panning mode, even with fast shutter speeds. They have valid reasons also backed up with excellent results:

- Most image stabilization systems ignore low frequency movement such as panning.
- Most image stabilization systems have a panning mode that stabilizes only at right angles to the motion of panning.
- Because telephoto lenses amplify vibration, images will benefit from IS even with shutter speeds as fast as 1/2000.
- IS will assist the photographer tracking the subject by producing a more stable image in the viewfinder.
- The focusing system may also benefit from the stable image, improving focus capture and tracking rates.

There you have both positions on the subject of IS for flight photos. I was in the IS-OFF camp but made the flip-flop after researching for this article. I now leave IS on or, if I remember, I use IS Panning mode for flight photos rather than turning IS off. Experiment and see what works best. If you turn IS off or use IS panning mode for flight photos, remember to return IS back to full stabilization when taking stills.

Ohio Listed Species – 2022

The Ohio state listed species 5-year revision cycle is published. The protections of an Endangered listing prohibit capture without specific ODNR permit; this includes net and release.

[Pub+5356+Ohio+Listed+Species_R0722.pdf \(ohiodnr.gov\)](#)

The list of Endangered Ohio Odonata doubled from 13 to 26 species. Ten Endangered species on the 2022 list were previously Unlisted. Four previously listed as Threatened are now listed as Endangered. The status of two Endangered species was downgraded to Threatened and two others downgraded to Species of Concern.

The status of native wildlife species is very important to the Division. While the listing process identifies individual wildlife species needing protection, it also serves as a powerful tool in the Division's planning process. It provides direction for the allocation of personnel time and funds in Division programs and projects. *Ohio Department of Natural Resources*

Ohio Endangered Species – Damselflies and Dragonflies

<i>2022 Status</i>	<i>Previous Status</i>
Boreal Bluet <i>Enallagma boreale</i>	<i>Threatened</i>
Hagen's Bluet <i>Enallagma hageni</i>	<i>Unlisted</i>
Marsh Bluet <i>Enallagma ebrium</i>	<i>Threatened</i>
Northern Bluet <i>Enallagma annexum</i>	<i>Threatened</i>
River Jewelwing <i>Calopteryx aequabilis</i>	<i>Endangered</i>
Taiga Bluet <i>Coenagrion resolutum</i>	<i>Unlisted</i>
Allegheny River Cruiser <i>Macromia alleghaniensis</i>	<i>Unlisted</i>
American Emerald <i>Cordulia shurtleffi</i>	<i>Endangered</i>
Brush-tipped Emerald <i>Somatochlora walshii</i>	<i>Endangered</i>
Canada Darner <i>Aeshna canadensis</i>	<i>Endangered</i>
Chalk-fronted Corporal <i>Ladona julia</i>	<i>Endangered</i>
Elfin Skimmer <i>Nannothemis bella</i>	<i>Endangered</i>
Four-spotted Skimmer <i>Libellula quadrimaculata</i>	<i>Unlisted</i>
Frosted Whiteface <i>Leucorrhinia frigida</i>	<i>Endangered</i>
Golden-winged Skimmer <i>Libellula auripennis</i>	<i>Unlisted</i>
Hine's emerald Skimmer *E <i>Somatochlora hineana</i>	<i>Endangered</i>
Little Blue Dragonlet <i>Erythrodiplax minuscula</i>	<i>Unlisted</i>
Mottled Darner <i>Aeshna clepsydra</i>	<i>Endangered</i>
Racket-tailed Emerald <i>Dorocordulia libera</i>	<i>Endangered</i>
Riffle Snaketail <i>Ophiogomphus carolus</i>	<i>Threatened</i>
Skillet Clubtail <i>Gomphurus ventricosus</i>	<i>Unlisted</i>
Slender Baskettail <i>Epitheca costalis</i>	<i>Unlisted</i>
Smoky Shadowdragon <i>Neurocordulia molesta</i>	<i>Unlisted</i>
Stygian Shadowdragon <i>Neurocordulia yamaskansiensis</i>	<i>Unlisted</i>
Uhler's Sundragon <i>Helocordulia uhleri</i>	<i>Endangered</i>
Yellow-sided Skimmer <i>Libellula flavida</i>	<i>Endangered</i>

Ohio Threatened Species – Damselflies and Dragonflies

<i>2022 Status</i>	<i>Previous Status</i>
Paiute Dancer <i>Argia alberta</i>	<i>Unlisted</i>
Seepage Dancer <i>Argia bipunctulata</i>	<i>Endangered</i>
Double-ringed Pennant <i>Celithemis verna</i>	<i>Unlisted</i>
Green-faced Clubtail <i>Gomphus viridifrons</i>	<i>Threatened</i>
Harlequin Darner <i>Gomphaeschna furcillata</i>	<i>Threatened</i>
Jade Clubtail <i>Arigomphus submedianus</i>	<i>Unlisted</i>
Ocellated Darner <i>Boyeria grafiana</i>	<i>Unlisted</i>
Plains Clubtail <i>Gomphurus externus</i>	<i>Endangered</i>
Southern Pygmy Clubtail <i>Lanthus vernalis</i>	<i>Unlisted</i>

Ohio Species of Concern – Damselflies and Dragonflies

<i>2022 Status</i>	<i>Previous Status</i>
Lilypad Forktail <i>Ischura kellicotti</i>	<i>Endangered</i>
Lyre-tipped Spreadwing <i>Lestes unguiculatus</i>	<i>Unlisted</i>
Sphagnum Sprite <i>Nehalennia gracilis</i>	<i>Unlisted</i>
Belted Whiteface <i>Leucorrhinia proxima</i>	<i>Unlisted</i>
Black-tipped Darner <i>Aeshna tuberculifera</i>	<i>Unlisted</i>
Blue Corporal <i>Ladona deplanata</i>	<i>Endangered</i>
Dusky Clubtail <i>Phanogomphus spicatus</i>	<i>Unlisted</i>
Eastern Ringtail <i>Erpetogomphus designatus</i>	<i>Unlisted</i>
Splendid Clubtail <i>Gomphurus lineatifrons</i>	<i>Unlisted</i>
Tiger Spiketail <i>Cordulegaster erronea</i>	<i>Concern</i>

Meadowhawks – What Do We Know?

Sally Isacco disacco@roadrunner.com | Jim Lemon jlem@woh.rr.com

August begins big months for Meadowhawks. While they can be seen starting in late June, late summer is generally their peak. It is interesting that Autumn Meadowhawk leads the observation count in more months than any other species (Sep, Oct, Nov), the other month leaders (Common Green Darner, Fragile Forktail, Eastern Forktail, Common Whitetail, Blue Dasher, Eastern Pondhawk) are primarily singles.

1) Meadowhawks can, for the most part, be identified from photos for Blue-faced, Band-winged, Autumn, Variegated, and Saffron-winged. That leaves the "black-legged" complex of Ruby, White-faced, and Cherry-faced.

2) Looking at the entire OOS database (thru 2021), as a genus, *Sympetrum* only lag behind damselflies and skimmers in numbers. Autumn are by far the most reported (4056) followed by Ruby (903), Blue-faced (855), Band-winged (642), White-faced (238) and Variegated (86). Cherry-faced (12) and Saffron-winged (20) are quite uncommon.

3) The same species for the iNat data (thru 7/31/22): Autumn (3505), Blue-faced (786), Band-winged (507), White-faced (118), Ruby (84), Variegated (53), Cherry-faced (1), Saffron-winged (1).

4) There is a considerable discrepancy in historical vs recent for Ruby (big decrease), Blue-faced (big increase), Band-winged (increase), Variegated (outbreak level increase in 2020 where we had 43 observations). If we look at historical records by species/county and what's missing in current observation data (iNat), Ruby has the most counties without a recent record (53). This means we're missing more Ruby in our recent data than any other species.

We have, in iNat, 1,468 Meadowhawk observations that need ID. This is considerably more than pending Baskettails and Pond Spreadwings, which are our other two ID-problems. Most of the 1,468 are photos of adults. After Ruby Meadowhawk, Fawn Darner is next in line as most under-represented in recent data with 23 observations that need ID. Also note that most of the historical Meadowhawk records were adults, while many of the historical records for Fawn were EPA-recorded larvae. I think this is a clear case that we should be doing more with Ruby. The breakdown, based on historical data of the black-legged species in question, 86% are Ruby, 13% are White-faced and 1% are Cherry-faced. Going back through the numbers, it seems quite likely to me that around 1,200 of the unclaimed *Sympetrum* are Ruby.

5) For me, there is a considerable amount of in-the-field experience that doesn't translate into photos. I feel more confident in IDs when I'm with someone and they make a picture. Scale, location, background all contribute.

Autumn Meadowhawk *Sympetrum vivinum*, as noted, is our most common *Sympetrum* by a considerable margin. They can be found in all Ohio counties. The combination of being common and easy to ID makes them easy targets. They are tolerant of a range of wetland habitats and human activity. Autumns are also relatively easy to identify. A key field mark is pale legs, a former common name was Yellow-legged Meadowhawk. Freshly emerged adults are yellow and become red as they mature.



Autumn Meadowhawk
Immature female, Lake Co, 26 July 2022
Sally Isacco



Autumn Meadowhawk
Maturing female, Champaign Co, Sep 20, 2020
Jim Lemon

Autumn Meadowhawk
Maturing male, Geauga Co, Sep 22, 2019
Sally Isacco



Autumn Meadowhawk
Mature male, Champaign Co, Sep 26, 2017
Jim Lemon



Autumn Meadowhawk
Pair, Champaign Co, Nov 11, 2014. Jim Lemon.

Blue-faced Meadowhawk *Sympetrum ambiguum* is our next easy ID. Peak flight for Blue-faced is early September. Beautiful small dragonflies, Blue-faced routinely perch and are quite photogenic. Look in the meadows around ponds or streams. The eyes and thorax color are the key field marks.

Blue-faced Meadowhawk
Males Lucas County, Sep 15 2018. Rick Nirschl



Blue-faced Meadowhawk
Female, Lucas Co, Aug 19, 2021. Rick Nirschl



The smallest Ohio *Sympetrum* is the **Band-winged Meadowhawk** *Sympetrum semicinctum*. Band-winged seems to like marshy areas with abundant emergent vegetation. Like other Meadowhawks, they are yellowish or golden when first emerged then mature into red. Key field mark is the broad golden band on the hind wings.



Band-winged Meadowhawk
Teneral female, Clark Co, Jun 26, 2022. Jim Lemon



Band-winged Meadowhawk
Mature female, Champaign Co, Jul 9, 2018
Jim Lemon

Band-winged Meadowhawk
Mature male, Champaign Co, Sep 15, 2019.
Jim Lemon



Band-winged Meadowhawk
Mating pair in wheel, Clark Co, Jul 8, 2019
Jim Lemon



Variegated Meadowhawk *Sympetrum corruptum* is an occasional vagrant to Ohio. Another beautifully colored dragonfly, it is larger than our other *Sympetrum*, similar in size and behavior to the Glider species. While not regularly seen, they are easy to ID. They have been seen as early as March and as late as November. Look for them at marshy wetlands, brightly marked with a broken pattern on the abdomen.

Variegated Meadowhawk

Male, Lucas Co, Jun 2, 2012. Rick Nirschl.



Variegated Meadowhawk

Tandem pair, Greene Co, Apr 6, 2020. Jim Lemon.

There are two rarely seen Meadowhawks, **Saffron-winged** *Sympetrum costiferum* and **Cherry-faced** *Sympetrum internum*. We'll leave Saffron-winged at that. Cherry-faced will be mentioned in the next segment.

Now, the hard part. There are red Meadowhawks that have black legs. We call these the Black-legged Meadowhawks. This complex involves **Ruby Meadowhawk** *Sympetrum rubicundulum*, **White-faced Meadowhawk** *Sympetrum obtrusum*, and the previously side-stepped Cherry-faced (which we'll sidestep again).

We think some of White-faced can be identified from photos. Males are bright red with black legs and a bone white face. Females can also have a whitish face. There may be some individual White-faced that don't have a bright white face – hence part of the confusion.



White-faced Meadowhawk
Male, Lucas Co, Aug 8, 2019. Jim Lemon.

White-faced Meadowhawk
Female, Lucas Co, Jun 30, 2018., Rick Nirschl.



White-faced Meadowhawk
Mating pair in wheel, Lucas Co, Aug 16, 2019.
Rick Nirschl



All that's left is the Ruby Meadowhawk. Identifying Ruby (or Cherry-faced) requires some additional work. Anecdotal info suggests that the face-color doesn't always hold up as a field mark. Further, that there may be hybrids. Even further, that these three may be a single species with regional variation. I have seen male *Sympetrum* with the bone-white face and considered them White-faced – I have not netted them to confirm their hamules. I have also seen males with very rosy-red faces that have Ruby hamules, also, a mature male or two where the hamules were very much in-the-middle.

Paulson refers to difference in hamules (M) and subgenital plate (F). Everyone cautions against ID'ing tenerals/immatures. Females also appear to be more problematic than males.

The upshot is that we need more careful observations. Following are some photos that demonstrate the needed angles. Some of this involves netting individuals or mating pairs and then macro-photography of the hamules (male) or subgenital plate (female). The hamules are on the ventral thorax (underside of main body below the wings) for the males. The subgenital plate is on the ventral end of the abdomen for females. For folks that prefer not to net, I've included pics of a specimen removed from a spider web. Keep an eye out for that!

Ruby Meadowhawk

Mature male, Montgomery Co, Aug 4, 2021.
Jim Lemon



Ruby Meadowhawk

Mating pair in wheel, Champaign Co, Aug 23, 2019.
Jim Lemon



Ruby Meadowhawk
Male hamules, Champaign Co, Aug 23, 2019.
Jim Lemon



Ruby Meadowhawk
Female subgenital plate, Champaign Co, Aug 23,
2019, Jim Lemon



Ruby Meadowhawk
Male from spider web, Champaign Co, Jul 17, 2021.
Jim Lemon



Ruby Meadowhawk
Details for male from spider web, Champaign Co,
Jul 17, 2021. Jim Lemon

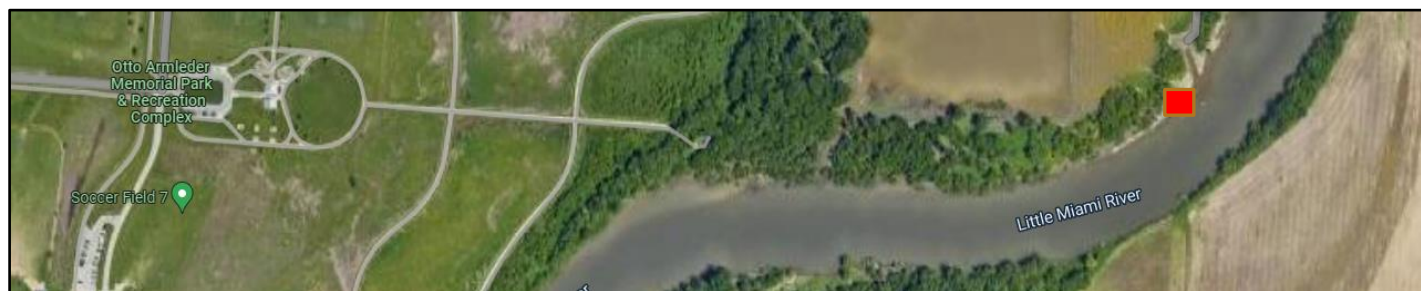
Little Miami River – August and September Clubtails Jim Lundberg

Otto Armleder Park, 5057 Wooster Pike, Cincinnati, Ohio. Otto's north beach, with a mix of sand and cobblestone, brush and trees and few visitors, is attractive to the Clubtails. Be aware that collecting is not allowed except with Hamilton County permit. Photo: **Eastern Ringtail** *Erpetogomphus designates*. July 25 2020. Jim Lundberg



Before committing to the visit, check forecasts to determine if conditions are favorable. Low water, low wind and lots of sun is best. The nearest water level measurement is Milford Ohio. [Little Miami River at Milford OH - USGS Water Data](#). A Milford reading below 6.0 feet exposes plenty of beach at Otto Armleder. Below 5.0 feet is even better, as a wider beach means closer approach to the flying Clubtails. Double-check the water level the morning of the visit since the USGS three-day forecast doesn't take into account Army Corps of Engineers water release from the two dams. Hot sunny days from 11am to late afternoon hold the greatest amount of flight activity. Light, occasional afternoon breezes are almost certain on hot afternoons, but a forecast for strong winds is discouraging – expect reduced patrolling and sparkling ripples making flight photo focus difficult.

The ability to take flight photos is not necessary but will offer more photo opportunities. Russet-tipped Clubtails bump along slowly a foot or two above the water, most often patrolling close to the shadow of the opposite bank. Depending on water level and time of day, this can be distant, so bring your longest lens. Eastern Ringtail flights are also slow and low over the water but of shorter duration and less restricted to a habitual path. Both species alternate between patrolling and perching. For still photos, slowly walk the vegetation line above the beach. If you arrive early, this is also the best strategy to locate Clubtails before they begin flying. Keep the scan going as you walk. Eastern Ringtails tend to perch on the ground and lower vegetation. Russet-tipped Clubtails are occasionally found low but tend to hang in the Giant Ragweed and Willow. Investigate any natural or manmade openings into the wood line for hunting females. In August the Ringtails can outnumber the Russet-tips, but the opposite holds true in September. Although uncommon, Elusive and Arrowhead, are also August and September possibilities. Elusive Clubtails are usually only seen in flight.



Walking Directions: One-way distance from parking is half-a-mile. From the parking lot, which is directly ahead when entering the park, circle around the pavilion then walk east on the paved path to the river overlook. The riverbank is steep here, so instead of plunging straight ahead, turn left on the primitive trail past the last bench. Poison Ivy and Stinging Nettle are both found in the area. Walk the trail about 100 yards and turn right down a short slope (slippery after a rain) into a bottomland area. Walk through the bottomland area 50 yards to a ditch (muddy after a rain) and turn right. Follow the ditch to the river's edge and then turn left. Walk upriver along the river's edge 100 yards to the beginning of the beach.



August Odes – One New, More Goodbye Jim Lemon jlem@woh.rr.com

Days begin to be noticeably shorter, evenings starting to cool, and with the changes, now Odonata numbers are on the way down. Here is a table of the one species that has an early flight date of August.

Species	Early	Observations All Data	Recent Years
Smoky Rubyspot	7-Aug	221	156

Now the set of species that were likely done for this season in July. Observations beyond the late date listed will constitute new late flight dates.

Species	Late	Observations All Data	Recent Years
Scarlet Skimmer	2-Jul	2	2
Little Blue Dragonlet	6-Jul	4	3
Lilypad Clubtail	7-Jul	79	41
Delta-spotted Spiketail	7-Jul	76	34
Dusky Clubtail	11-Jul	132	49
Southern Pygmy Clubtail	11-Jul	64	37
River Bluet	13-Jul	3	1
Springtime Darner	15-Jul	212	84
Racket-tailed Emerald	15-Jul	51	25
Riffle Snaketail	15-Jul	32	14
Aurora Damsel	16-Jul	327	152
Brown Spiketail	16-Jul	174	71
Double-ringed Pennant	16-Jul	26	26
Chalk-fronted Corporal	16-Jul	57	5
Four-spotted Skimmer	16-Jul	32	2
Ashy Clubtail	17-Jul	549	219
Jade Clubtail	17-Jul	60	60
Northern Bluet	17-Jul	50	10
Frosted Whiteface	18-Jul	29	9
Rapids Clubtail	19-Jul	155	79
Handsome Clubtail	20-Jul	88	35
Splendid Clubtail	20-Jul	70	22
Green-faced Clubtail	20-Jul	40	10
Golden-winged Skimmer	23-Jul	36	27
Duckweed Firetail	23-Jul	14	14
Twin-spotted Spiketail	23-Jul	73	12
Lancet Clubtail	24-Jul	904	580
Hagen's Bluet	28-Jul	83	18

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

July was another good month, not quite record setting but very good. So far on the year, we have 21,477 research grade (RG) observation submitted to iNaturalist. This represents 129 species, from 249 observers. The top reported species are Blue Dasher, Eastern Forktail, Eastern Pondhawk, Common Whitetail, and Fragile Forktail. Interesting that Variable Dancer (also known here as Violet Dancer) still has a sizable lead on Blue-tipped and Blue-fronted – this is not the normal case.

July has over 6,400 research grade observations at this point. Eastern Pondhawk and Blue Dasher led species numbers with 500+ observations.

Nice early finds in July: Mocha Emerald, Green-striped Darner, Clamp-tipped Emerald, Eastern Ringtail, Laura's Clubtail, Russet-tipped Clubtail.

Species we should be able to find in August include other late season species: Arrow Clubtail, Black-tipped Darner, Striped Saddlebags, Ocellated Darner, Elusive Clubtail.

88 Counties	# Observations	# Sp	# Users	# Co Records
Adams	64	27	17	
Allen	36	20	5	
Ashland	167	29	10	
Ashtabula	735	56	16	
Athens	27	18	11	
Auglaize	50	21	2	3
Belmont	120	18	1	1
Brown	73	32	5	
Butler	371	38	33	1
Carroll	92	24	5	1
Champaign	907	62	33	1
Clark	617	49	19	3
Clermont	287	46	30	1
Clinton	73	25	7	
Columbiana	79	38	9	6
Coshocton	718	47	8	1
Crawford	94	29	6	3
Cuyahoga	538	47	79	
Darke	133	42	6	1
Defiance	40	19	5	
Delaware	117	23	32	
Erie	159	29	15	
Fairfield	43	24	13	
Fayette	131	25	5	2
Franklin	1612	54	89	1
Fulton	181	27	6	

Gallia	41	17	7	
Geauga	390	61	34	1
Greene	501	53	55	
Guernsey	75	18	2	
Hamilton	377	49	48	1
Hancock	335	57	18	2
Hardin	77	31	3	1
Harrison	201	32	5	1
Henry	250	31	6	1
Highland	59	22	10	
Hocking	91	32	19	
Holmes	160	27	7	1
Huron	290	26	5	3
Jackson	88	28	6	
Jefferson	183	31	5	2
Knox	48	11	12	
Lake	378	60	36	1
Lawrence	155	34	4	1
Licking	174	31	23	1
Logan	132	38	15	1
Lorain	568	46	29	1
Lucas	1364	71	55	1
Madison	207	30	12	2
Mahoning	70	32	8	1
Marion	253	21	6	
Medina	172	39	23	2
Meigs	108	30	1	3
Mercer	67	19	2	1
Miami	403	51	19	
Monroe	96	26	2	2
Montgomery	991	71	43	3
Morgan	27	19	4	
Morrow	446	30	15	1
Muskingum	176	31	6	
Noble	209	23	6	
Ottawa	58	23	28	3
Paulding	13	7	2	
Perry	78	20	1	1
Pickaway	96	31	14	3
Pike	108	30	7	2

Portage	349	68	39	1
Preble	135	35	7	3
Putnam	81	23	1	
Richland	97	27	9	1
Ross	43	25	10	
Sandusky	155	37	9	2
Scioto	63	24	9	1
Seneca	90	24	7	3
Shelby	116	31	13	5
Stark	1635	68	32	4
Summit	602	61	85	
Trumbull	50	28	8	1
Tuscarawas	140	27	4	1
Union	245	23	8	
Van Wert	12	10	1	
Vinton	61	29	5	
Warren	132	39	24	1
Washington	89	24	2	
Wayne	148	23	17	1
Williams	116	33	3	1
Wood	107	28	20	2
Wyandot	32	19	7	

<i>Species</i>	<i># Observations</i>	<i># Counties</i>	<i># Users</i>	<i># Co Records</i>
Amber-winged Spreadwing	55	15	18	1
American Rubyspot	204	31	45	
Arrowhead Spiketail	19	10	14	1
Ashy Clubtail	91	18	27	
Aurora Damsel	43	15	21	1
Autumn Meadowhawk	90	31	39	
Azure Bluet	249	48	66	1
Band-winged Meadowhawk	59	16	28	2
Banded Pennant	83	18	22	2
Beaverpond Baskettail	2	1	1	
Black Saddlebags	316	63	65	
Black-shouldered Spinyleg	41	18	21	1
Blue Corporal	25	10	17	1
Blue Dasher	1642	87	233	

Blue-faced Meadowhawk	16	9	14	1
Blue-fronted Dancer	524	69	86	
Blue-ringed Dancer	130	29	35	
Blue-tipped Dancer	562	67	82	
Brown Spiketail	15	4	5	
Calico Pennant	254	45	63	
Carolina Saddlebags	171	36	57	2
Citrine Forktail	119	31	30	2
Clamp-tipped Emerald	4	4	4	
Cobra Clubtail	53	4	20	
Comet Darner	94	31	34	5
Common Baskettail	32	17	21	1
Common Green Darner	268	62	81	
Common Sanddragon	17	4	4	
Common Whitetail	1245	85	246	
Cyrano Darner	39	20	20	3
Delta-spotted Spiketail	8	2	3	
Dot-tailed Whiteface	206	32	37	3
Double-ringed Pennant	6	1	1	
Double-striped Bluet	408	63	61	
Dragonhunter	59	15	26	2
Dusky Clubtail	16	4	7	
Dusky Dancer	103	26	32	
Eastern Amberwing	802	81	140	
Eastern Forktail	1465	83	138	
Eastern Least Clubtail	46	7	11	
Eastern Pondhawk	1368	84	180	
Eastern Red Damsel	181	20	43	1
Eastern Ringtail	2	2	2	
Ebony Jewelwing	925	73	269	
Elegant Spreadwing	51	17	20	
Elfin Skimmer	76	1	17	
Familiar Bluet	355	62	66	
Fawn Darner	12	9	12	
Flag-tailed Spinyleg	60	15	16	
Fragile Forktail	1163	87	147	
Furtive Forktail	1	1	1	1
Gilded River Cruiser	5	3	4	
Golden-winged Skimmer	6	3	4	
Gray Petaltail	58	14	28	2

Great Blue Skimmer	117	29	36	7
Green-faced Clubtail	13	1	4	
Green-striped Darner	1	1	1	
Halloween Pennant	296	58	88	
Handsome Clubtail	17	6	7	1
Harlequin Darner	24	3	8	
Jade Clubtail	26	4	11	2
Lance-tipped Darner	3	3	3	
Lancet Clubtail	222	37	33	1
Laura's Clubtail	1	1	1	
Lilypad Clubtail	1	1	1	
Lilypad Forktail	30	6	12	
Little Blue Dragonlet	1	1	1	1
Lyre-tipped Spreadwing	4	1	3	
Macromia Hybrid	6	3	4	1
Midland Clubtail	82	17	21	2
Mocha Emerald	4	4	4	1
Northern Bluet	3	2	3	
Northern Emerald Spreadwing	66	16	28	
Northern Spreadwing	1	1	1	1
Orange Bluet	309	64	58	1
Painted Skimmer	278	42	74	8
Paiute Dancer	53	3	15	
Plains Clubtail	33	1	6	
Powdered Dancer	418	51	81	
Prince Baskettail	289	68	57	
Pronghorn Clubtail	16	5	10	
Racket-tailed Emerald	10	3	6	
Rainbow Bluet	22	6	10	
Rapids Clubtail	14	7	9	1
Red Saddlebags	11	4	6	1
Riffle Snaketail	3	1	3	
River Bluet	9	1	7	
River Jewelwing	1	1	1	
Royal River Cruiser	27	19	20	2
Ruby Meadowhawk	15	7	7	1
Russet-tipped Clubtail	1	1	1	
Rusty Snaketail	23	4	9	
Sedge Sprite	66	11	20	1
Seepage Dancer	173	5	32	

Shadow Darner	6	6	6	
Skimming Bluet	307	56	55	
Slaty Skimmer	392	52	85	2
Slender Baskettail	1	1	1	1
Slender Spreadwing	382	61	75	
Southern Pygmy Clubtail	5	3	4	1
Southern Spreadwing	4	3	4	1
Spangled Skimmer	152	41	44	5
Spatterdock Darner	16	7	12	
Sphagnum Sprite	67	8	20	
Splendid Clubtail	11	2	7	
Spot-winged Glider	36	14	14	
Spotted Spreadwing	7	6	7	
Springtime Darner	24	14	17	1
Stream Bluet	440	60	70	
Stream Cruiser	18	5	7	1
Swamp Darner	68	29	47	4
Swamp Spreadwing	33	15	15	1
Sweetflag Spreadwing	35	16	20	1
Swift River Cruiser	26	15	15	
Swift Setwing	20	6	9	1
Tiger Spiketail	6	5	5	
Tule Bluet	23	5	6	
Turquoise Bluet	97	15	18	1
Twelve-spotted Skimmer	412	58	110	
Twin-spotted Spiketail	3	3	3	1
Uhler's Sundragon	6	1	1	
Unicorn Clubtail	287	51	65	1
Vesper Bluet	76	20	20	3
Violet Dancer	663	70	94	
Wandering Glider	70	28	31	1
Westfall's Slender Bluet	267	48	57	4
White-faced Meadowhawk	5	2	4	
Widow Skimmer	949	85	181	
Yellow-sided Skimmer	30	1	3	