

Dragonflies and Damselflies of Calvert County 2022 Annual Report



Big Bluet (*Enallagma durum*)

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The Calvert County Natural Resources Division is sponsoring an ongoing research program to document what species of the order Odonata (*Dragonflies and Damselflies*) occur in the county. The Calvert Stewards volunteers will search county and state parks, public and private property, and any suitable habitat within the county to look for different types of Odonates and the abundance of those species. They will obtain photographs and identify locations and species of Odonates so that records can be submitted to the Odonata Central database to be properly vetted and confirmed. Additionally, records will also be submitted to Richard Orr of Mid-Atlantic Invertebrate Field Studies and the Dragonflies and Damselflies of Calvert County project within iNaturalist. The Maryland Biodiversity Project and the Calvert County Biodiversity project have synched observations with iNaturalist and is the main resource for tracking volunteer and non-volunteer sightings in the county.

Volunteers

The combined total number of volunteer hours for 2022 was 409.02.

Jason Avery 310.27hrs
Tonyia Johnson 46hrs
Rick Smith 34hrs
Karen Anderson 6.5hrs
Mike Carpenter 5.5
Mary Hollinger 5.25hrs
Maggie Silverman 1.5hrs

Sue Hamilton, Mollie King, and Paul Lang documented observations through iNaturalist

Skills Needed

- All skill levels are encouraged to participate
- The ability to work alone or with a group
- The ability or desire to learn and identify odonata
- The ability to walk in and on all types of landscapes to include (ponds, creeks, lakes, fields, forest, and swamps)

Preferred Skills

- The ability to have basic computer skills to submit records via the internet.
- The ability to photograph species found

Volunteer Duties

- Explore different types of landscapes to locate and identify odonata
- Map locations accurately on paper maps or online
- Photograph odonates well enough for proper identification
- Identify the habitat characteristics and abundance

Requirements and Expectations

- Walk and methodically search for odonates
- Be considerate of sensitive species and information regarding locations
- Be exposed to ticks, chiggers, mosquitoes, people, stinging insects, poison ivy, and getting wet.
- Follow all rules, regulations, and guidelines while on county, state, and private properties

Training

- Orientation through a presentation of odonata (TBD)
- An advanced class on odonata and records and submission (TBD)
- On-going opportunities to join scheduled odonata research (TBD)

Project Dates

Early Spring – can start as early as March 15

Summer – research will be at its peak

Fall – continue to check established locations for species of odonata still flying to establish late flight period dates and look for species that emerge late in the season.

Summary of 2022 Field Study

2022 was the fifth year of the field study in which the cumulative list was increased from 85 species to 88 different species known to occur throughout Calvert County. The Swift River Cruiser (#86) was discovered on June 5, 2022 at the Ward Farm Recreation and Nature Park by Maggie Silverman. On June 17, 2022, a general Lancet Clubtail (#87) was also found at Ward Farm. On July 24, 2022, Jenny Glenn discovered and submitted via iNaturalist a sighting of a Duckweed Firetail (#88) in the marsh at Calvert Cliffs State Park. This was an incredible find as it is considered an S1 and nearly extinct from the state. Hopefully, more work can be done in the 2023 season to determine if this was an incidental sighting or there is a new population.

The cumulative list for the state, "*The Dragonflies and Damselflies of Maryland and the District of Columbia*" is still maintained by Richard Orr of the Mid-Atlantic Invertebrate Field Studies. In conjunction with Richard Orr's list, iNaturalist continues to be a major source of record keeping due to its popularity, simplicity and the number of observations being submitted. Rick Smith continues his consistent observations at Calvert Cliffs State Park and reported the continuing of the Eastern Red Damselfly, Southern Sprite, and Slender Bluets among other species. Another highlight was the exploration of the new location known as the Lyons Creek stream that runs along the northern boundaries of Calvert and Anne Arundel Counties. Many Blue-tipped Dancers, Dragonhunters, Royal River Cruisers and Russett-tipped Clubtails were observed in this beautiful stream.

2022 was the year of the Tiger! Not only was it a high priority for the project to relocate a second Tiger Spiketail but it was also Jason's personal objective. In 2021, volunteer Maggie Silverman observed and recorded the first Tiger Spiketail for the county at the Huntingtown Wildlife Management Area. An elder female was seen perched on the side of a tree just off the paved roadway that leads down to the river. Over the winter efforts had started to research the area for suitable habitats. The Tiger Spiketail prefers small flowing streams with rocky and sandy substrates and the stream that runs through the park is perfect. In June, the hunt was on! Day after day in the mid-summer heat, repeated trips were made to the site to locate the most pristine habitat it could be found in. On July 24th, after 11 days and 48 hours of searching, one single Tiger Spiketail was found patrolling a very small part of the stream that makes its way into the body of the main feed that leads to the river. (See *photo of actual location*) This part of the stream is so well hidden and deep in the forest, it doesn't show up on GPS. At times, three cameras had been set up with the hope of recording a flyby. However, after reviewing several hours of footage, nothing was ever captured. On August 13th, and after 15 days and a total of 68hrs devoted trying to see it a second time, it was time to call it quits for 2022. Hopefully, in 2023 the Tiger Spiketail will have a good year and be more abundant and easier to find.



3 NEW locations were added as part of this research project: Calvert Marina Community Pond, Dowell Road Natural Area And Lyons Creek Stream (Rt.4 / 260 interchange). Other sites monitored are Battle Creek Cypress Swamp, Bennett O. Hughes Memorial Tree Farm, Biscoe Gray Heritage Park, Calvert Cliffs State Park, Calvert County Business Park, Calvert High School pond, Chesapeake Beach Wetlands Park, Chesapeake Highlands Memorial Gardens, College of Southern Maryland Prince Frederick campus, Cove Point Park, Cove Point Community Lake, Cove Point Beach, Dares Beach Road pond (Dares Beach @ Rt. 4), Dominion Energy Warehouse pond, , Dunkirk District Park, Fastop Natural Area in St. Leonard, Flag Ponds, Gatewood Nature Preserve, Hutchins Pond, Jefferson Patterson Park and Museum, Kings Landing Park, Lake Collusion, Lyons Creek Road Community pond, “Smoky Road” Huntingtown Wildlife Management Area, Ward Road Farm Nature Park, and Wetlands Overlook Park.

A Few Highlights

Bennett O. Hughes Memorial Tree Farm



The “Tree Farm” was not as active with high numbers as in 2022 as it was in 2021; however, four new species were added to the list bringing it from 41 to 45. A Furtive Forktail (#42) was found at the pond hiding in the grass. This is the second location in the county for this rare species. A Unicorn Clubtail (#43) was discovered down by the stream patrolling the sand bars and at the same time a male Variable Dancer (#44) was found a few feet away in the tall grass. Finally, a teneral male Autumn Meadowhawk (#45) was observed and photographed perched high on a branch near the parking lot. This species has eluded the list every year despite perfect habitat.

Autumn Meadowhawk (*Sympetrum vicinum*)

Photo from 2022

Battle Creek Cypress Swamp Sanctuary

Battle Creek Cypress Swamp also had a good year for odes in 2022. The Furtive Forktail was relocated and both male and females were seen. Harlequin Darners seemed to have better numbers and both male and female were observed together as well as three were seen on the wing at the same time. On June 18th, volunteer Rick Smith observed and photographed the first Dragonhunter (#33) for the sanctuary near the meadow. On June 23rd on an evening walk, a Taper-tailed Darner (#34) was witnessed eclosing from its exuvia. The entire process was photographed and documented. The adult finally made its first flight to a resting spot high in a Cypress tree and the exuvia was collected. This appears to be a very special event as the Taper-tailed Darner is extremely reclusive. This brings the total number of odes to 34.



Furtive Forktail (*Ischnura prognata*)

Photo from 2022

A few species that were previously discovered were also relocated during this season:

- **Sable Clubtail** – one teneral male at the Tree Farm (First record, Cove Point 2011. Rediscovered during 2021, Bennett O. Hughes Memorial Tree Farm)
- **Taper-tailed Darner** – eclosion and first flight witnessed. Exuvia and photographs documented and confirmed (New location 2022 at Battle Creek Cypress Swamp)
- **Arrowhead Spiketail** – relocated at the Tree Farm (First record, Cove Point in 2011. Relocated in 2021, Calvert Cliffs State Park and Battle Creek Cypress Swamp)
- **Dragonhunter** – many eclosions at Ward District Park. Exuvia and photographs documented and confirmed (First record, Cove Point in 2011. Relocated 2021, Bennett O. Hughes Memorial Tree Farm) Continues at the Tree Farm and dominates the stream.



Laura's Clubtail (*Stylurus laurae*)
Photo from 2022

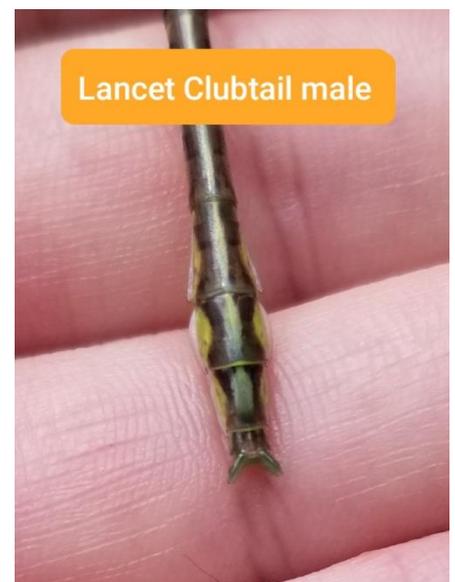
- **Double-striped Bluet** – several mating pairs observed at Hutchin's Pond (First record, Cove Point in 2011. New record 2020, Calvert High School ponds and NEW location in 2021, Hutchin's Pond) This proved to be a good location for them as several mating pairs were observed.

- **Laura's Clubtail** – one female discovered at the Huntingtown WMA. This is a new location for Laura's Clubtail in the county and for the state as it is an S1. It was NOT relocated at the Tree Farm in 2022

Summary of new species for the county:

- **Swift River Cruiser** (Discovered at Ward District Park, 1st county record)
- **Duckweed Firetail** (Discovered at Calvert Cliffs State Park, 1st county record)
- **Lancet Clubtail** (Discovered at Ward District Park, 1st county record)

* All updates have been submitted to Odonata Central and Richard Orr.



Partnerships with Community Groups and other Organizations

On April 2, 2022 Jason gave the very first public presentation about the Dragonflies and Damselflies volunteer project at the Maryland Osprey Nature Festival. The next scheduled talk in the community is at the Calvert Pines Senior Center on April 4, 2023. Through these talks, we hope to educate the community on the importance of having odonata and why habitat for all species needs to be protected.

We continue to collaborate with Bill Hubick and Jim Brighton of the Maryland Biodiversity page to ensure all information on sensitive species is handled in the correct manner. Those submissions will be added to the MBP Sensitive species project which has limited permissions.

The College of Southern Maryland continued to allow us access to the pond which was initially denied to us. Thanks to Steve Campbell, head of Security, we were allowed onto the campus during the weekend hours. The odonate count for CSM was low this year. The increase of breeding Red-winged Blackbirds continues to be a problem for the low numbers.

Other partners are Dominion Energy for continuing to allow us access to the pond. Richard Orr of the Mid-Atlantic Invertebrate study for maintaining the updated list of Dragonflies and Damselflies of Maryland and DC. The vetters who contribute their time and effort on Odonata Central. The Maryland Department of Natural Resources staff at Calvert Cliffs State Park for allowing us to have parking access on days they are at full capacity.

Future Plans

- To obtain more interest in this research project and to recruit more volunteers.
- To accomplish thorough searches throughout Calvert County
- To identify new habitats and locations worth monitoring
- To expand the current list of 85 species of odonata for Calvert County
- To continue to submit data to Odonata Central, Richard Orr of Mid-Atlantic Invertebrate Field Studies, iNaturalist and the Maryland Biodiversity Project.
- Work in conjunction with the Dragonfly Larva Mercury study
- To further research in the use and operation of the MOTUS tagging project
- Plan orientations and advanced trainings for new and current volunteers



Russett-tipped Clubtail (*Stylurus plagiatus*); New hot spot – Lyons Creek stream



Eastern Forktail (*Ischnura verticalis*)



Dragonhunter (*Hagenius brevistylus*)

Supporting Calvert County's nature parks and natural spaces



CALVERT STEWARDS

VOLUNTEER PROGRAM

A partnership between Calvert Nature Society and Calvert County Natural Resources Division

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CALVERT STEWARDS VOLUNTEER PROGRAM

c/o Natural Resources Division

2880 Grays Road

Prince Frederick, MD 20678

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Volunteer Portal: <https://calvertstewards.galaxydigital.com>

Calvert Nature Society: www.calvertparks.org

Calvert County Natural Resources Division: www.calvertcountymd.gov/NaturalResources

