

# Dragonfly Mercury Project 2021 Report

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Project Leader: Kimberly Curren, [Kimberly.Curren@calvertcountymd.gov](mailto:Kimberly.Curren@calvertcountymd.gov)

Number of Volunteers: 3

Volunteer Hours: 15

## Project Overview

Calvert County Natural Resources Division is partnered with US Geological Survey and the National Park Service to engage citizen scientists in the collection of juvenile dragonflies, also known as dragonfly larvae, for mercury analysis.

Mercury is a toxic pollutant that can harm human and wildlife health. Mercury often enters parks as air pollution from distant, human-caused sources, like coal-burning power plants. Dragonfly larvae are excellent indicators of mercury risk because they can live for years underwater eating insects and even small fish. Once it is deposited, mercury can build up inside the larvae and give scientists insight into the health of the waters in which they live. This study provides data for natural resource managers to protect human and wildlife health.

## Volunteer Duties

Volunteers enter a body of water wearing chest waders and use dip nets to search for larvae. Volunteers assist with sorting and identifying dragonfly larvae by family, recording data, and packaging samples for analysis.

## Requirements and Expectations

Volunteers are expected to familiarize themselves with how to identify larvae to family prior to the start of the sampling dates by watching videos and using identification guides provided by the project leader.

Volunteers are provided resources and training to familiarize themselves with safety and sanitation protocols that must be followed throughout larvae collection and identification.

## Trainings

Volunteers speak with the project leader regarding the nature of the project and will be given resources to assist them with identification of larvae. Volunteers should familiarize themselves with these resources prior to the start of the project.

## Equipment and Materials Needed

No personal equipment or materials needed.

CCNRD will provide chest waders, dip nets, magnifying glasses, and larvae collection bins. USGS will provide all sample packaging materials, data sheets, identification guides, and writing tools.

## Summary of 2021 Activities

Dragonfly larvae sampling took place over the course of three 2021 dates:

- August 18 at Flag Ponds Nature Park (2 staff, 1 volunteer)
- August 19 at Kings Landing Park (1 staff, 2 volunteers)
- August 23 at Battle Creek Cypress Swamp (1 staff, 2 volunteers)

Surveys were conducted in the morning from 8:30-11:30 a.m.

Larvae were collected and identified by family.

Families collected:

- Gomphidae (Club-tailed dragonflies)
- Aeshnidae (Darner dragonflies)
- Macromiidae (Cruiser dragonflies)
- Libellulidae (Skimmer dragonflies)

Once collected and packaged, samples were then shipped via FedEx to U.S. Geological Survey in Corvallis, Oregon.

## Future Plans

Hold an in-person orientation to review the program and practice dragonfly larvae identification.

*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*

# 2021 Annual Report

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CALVERT STEWARDS VOLUNTEER PROGRAM  
c/o Natural Resources Division  
2880 Grays Road  
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Volunteer Portal: <https://calvertstewards.galaxydigital.com/>

Calvert Nature Society: [www.calvertparks.org](http://www.calvertparks.org)

Calvert County Natural Resources Division:  
[www.calvertcountymd.gov/NaturalResources](http://www.calvertcountymd.gov/NaturalResources)

