

Lepidoptera and Odonata Conservation in the Dyke Marsh Wildlife Preserve, George Washington Memorial Parkway

Maintaining Insect Populations through Resource Management and Civic Action

- Worldwide, there is a 2.5 percent rate of annual loss of insects overall.
- Moths and butterflies are among the most at risk. Caddisflies are especially in decline with a 68 percent loss.
- Some native bee species populations are at risk. Some are endangered.

Surveys established a baseline of some species and are used to educate and engage the public.

Lepidoptera includes butterflies. Odonata includes damselflies and dragonflies.

The Process

Conducted Surveys

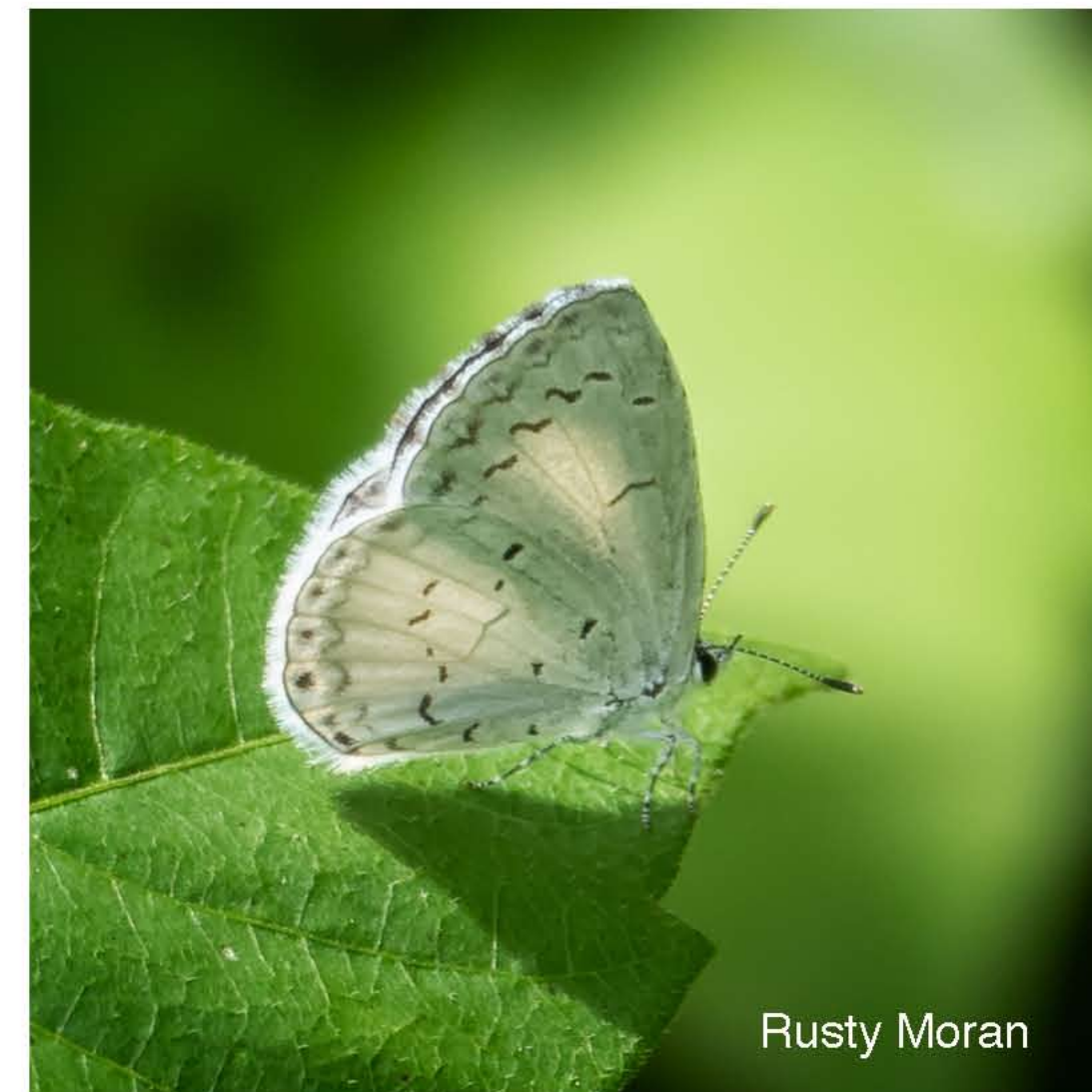
Teams conducted monthly field surveys of a segment of the Preserve for butterflies, dragonflies and damselflies. The survey teams used a consistent protocol, using observations and photographs only.

- Four years of surveys yielded 49 species of butterflies, 24 of dragonflies and 12 of damselflies.
- Butterfly results included many common species such as Pearl Crescent (*Phyciodes tharos*), Eastern Tiger Swallowtail (*Papilio glaucus*), and Eastern-tailed Blue-Summer Azure (*Everes comyntas*, *Celastrina laden*).
- Less common butterfly species included Red-Banded Hairstreak (*Calycopsis cecrops*) and Falcate Orange-Tip (*Arithocharis midea*). Monarch (*Danaus plexippus*) numbers have fluctuated from year to year.
- Dragonfly and damselfly results included high numbers of Needham's Skimmer (*Libuella vibrans*), Great Blue Skimmer (*Libuella vibrans*) and Big Bluet (*Enallagma cyathigerum*). Uncommon species included Cobra Clubtail (*Gomphus vastus*) and quite rare Fine-lined Emerald (*Somatochlora filosa*).

Examples of observations in the Dyke Marsh Wildlife Preserve are provided in the photographs on these two pages.



Common Buckeye, (*Junonia coenia*)



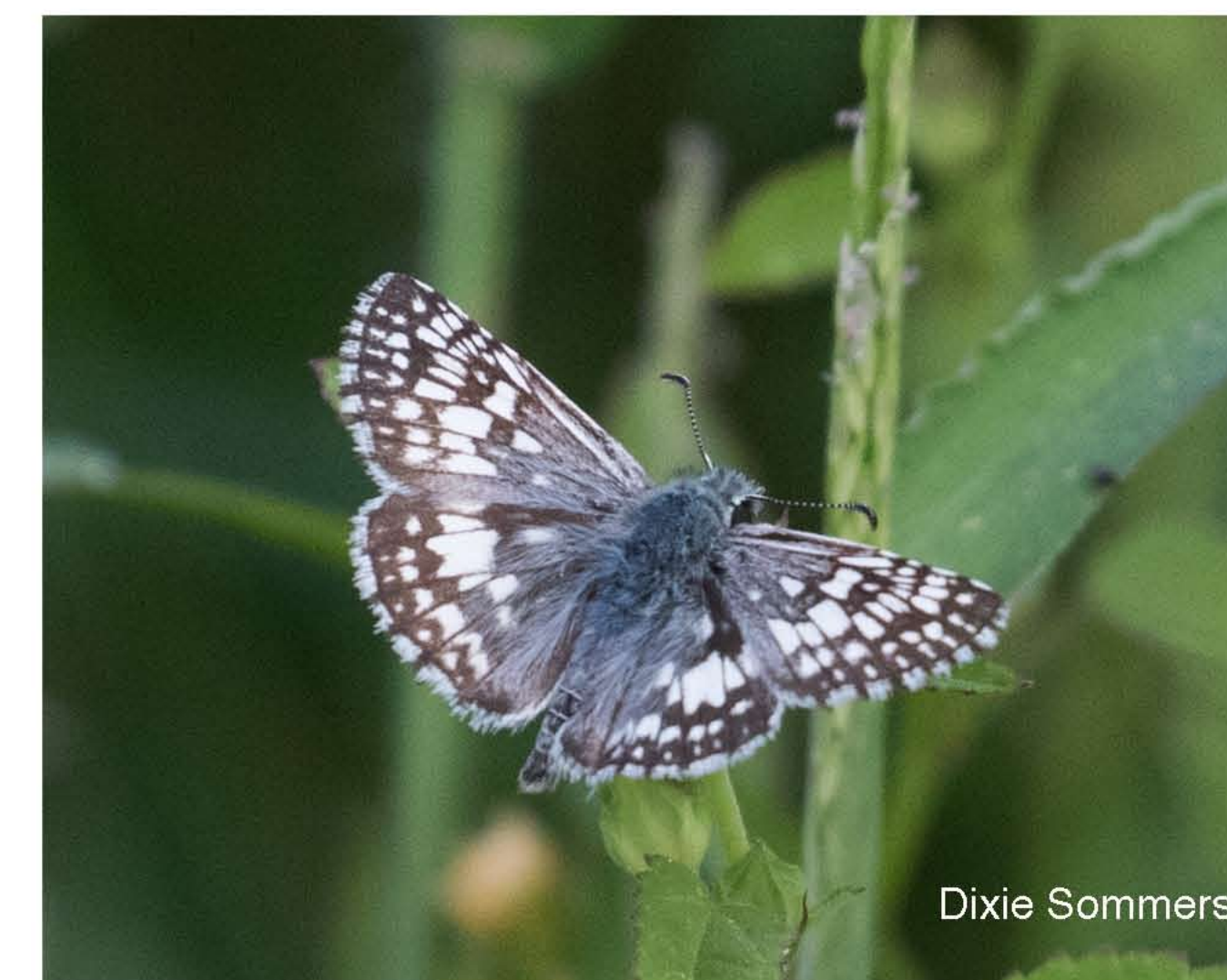
Summer Azure Butterfly (*Celastrina laden*)



Monarch Butterfly (*Danaus plexippus*)



Blue-fronted Dancer Damselfly (*Argia apicalis*)



Common Checkered Skipper Butterfly (*Pyrgus communis*)

Engaged and Collaborated with the Audubon Society of Northern Virginia and Citizen Scientists

The Friends of Dyke Marsh, an all-volunteer organization established in 1976, proposed the surveys and organized and led survey teams.

Identified Existing Surveys

FODM volunteers wished to complement and add to earlier and ongoing surveys conducted by the Audubon Society of Northern Virginia and other citizen scientists.

Surveys also built on data and observations by the Virginia Department of Conservation and Recreation and Georgetown University.

Presenter: Jessica Strother
www.fodm.org

Selected the Locations for Surveys

Volunteers conducted surveys at the Belle Haven Marina, a portion of Belle Haven Park, and the two-mile (round trip) Haul Road trail in the Preserve.

Established Parameters and Conducted Fundraising

FODM obtained a Department of Interior permit and recruited and coordinated volunteers. Teams conducted surveys one to two times a month using a consistent approach for eight months each year. The Friends of Dyke Marsh sought and received donations to purchase over 4,000 native plants and trees for a .065 acre native plant site.

Organized Interpretive Services to Educate and Engage the Public

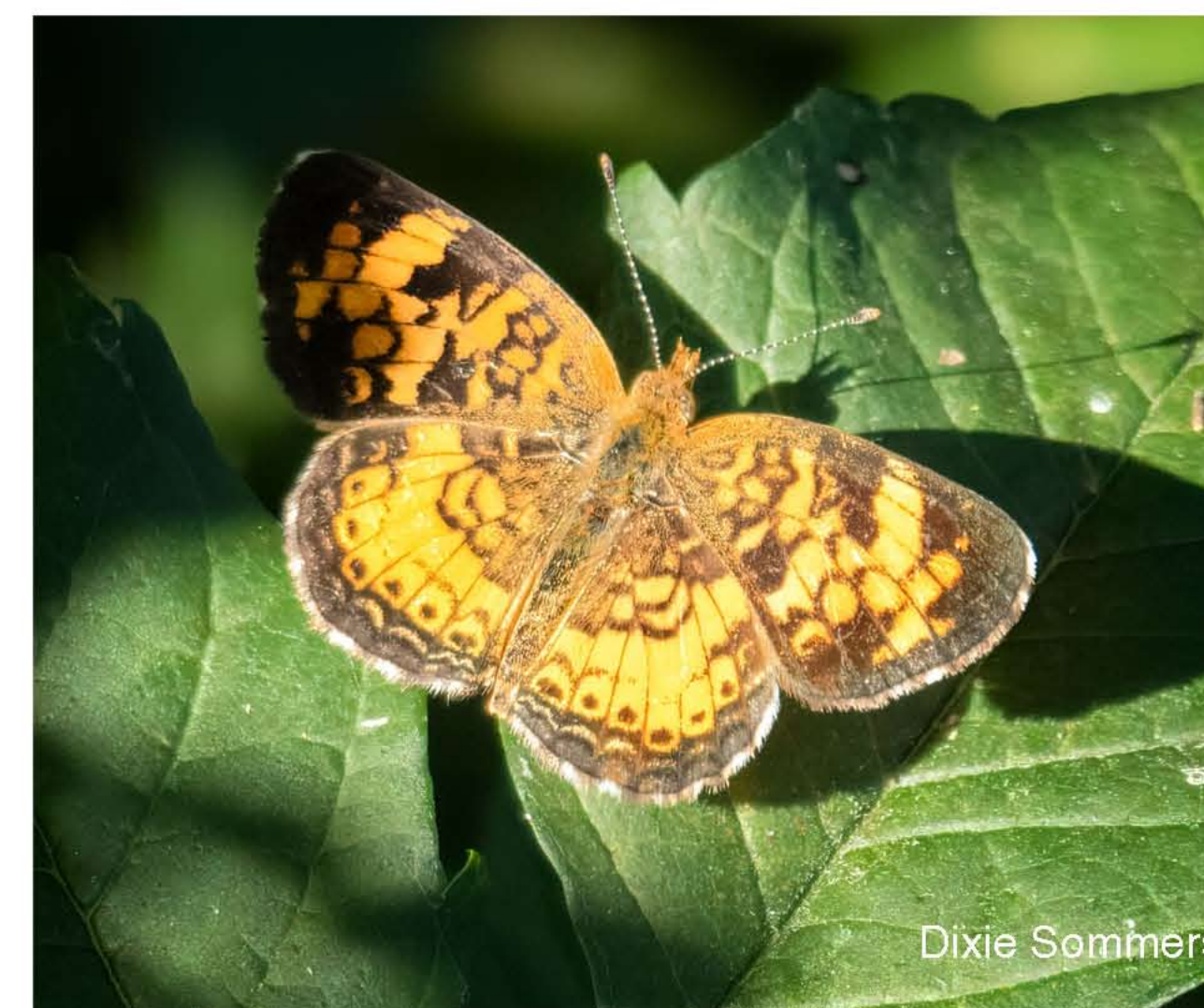
Volunteers conducted an interpretive walks, published articles in the Friends of Dyke Marsh newsletters and with the National Park Service, prepared a Lepidoptera species checklist with many host plants.



Question Mark Butterfly (*Polygonia interrogations*)



Eastern Forktail Damselfly (*Ischnura verticalis*)



Pearl Crescent Butterfly (*Phyciodes tharos*)



Common Whitetail Dragonfly (*Plathonis lydia*)



Great Blue Skimmer Dragonfly (*Libuella vibrans*)



Mourning Cloak Butterfly (*Nymphalius antiopa*)

Site Restoration for Improved Plant Habitat

A variety of host and nectar plants exist in the Preserve and survey area, including a large variety of grass and sedge species and elm, willow, locust, tulip poplar and dogwood trees.

Shrubs include sumacs and viburnums.

Three separate planting projects have provided some host and nectar plants, including deer tongue, wing-stem, tick-trefoil ironweed, milkweed and tulip poplar, among others.

Much of the Preserve and survey area is impacted by ever encroaching invasive plants such as English ivy, honey-suckle species, porcelainberry and stilt grass. A number of invasive plant removal projects over the years in partnership with, and by the National Park Service, have contributed to maintaining some healthy habitat for a wide variety of fauna and butterflies, dragonflies and damselflies.

A list of butterflies and host plants identified during the survey work can be found at www.fodm.org/images/Butterfly.pdf

Questions regarding the information in this poster can be sent to info@fodm.org.

Please put "Poster" in the subject line.