

2023 Howard County Butterfly Year

By Kevin Heffernan

Last year we completed the tenth year of the Howard County Butterfly Survey. Every survey has key participants who spend the most time and effort in the field and this one is no different. This year, however, several of the key participants spent less time in the field due to family reasons, health reasons, etc. As a result, we had only ~75% of the surveys (878), field minutes (48536), and number of butterflies (19548) reported from the peak year of 2021. Due primarily to the seven butterfly walks, we had the largest number of participants (113) ever. We found 70 species, including a species new to the survey, the Northern Oak Hairstreak. We now have a total of 81 species and 215,464 individual butterflies seen in the ten years of the survey. The 437,471 minutes in the field = 7291 hours or 182 40-hour work weeks equivalent to 3.5 years of effort.

A project of this size does not succeed without a lot of help and dedication. So, some big thank you's are in order, particularly to the contributors. The following people submitted 10 or more butterfly reports this year: Clayton Koonce (212), Linda Hunt (109), Kathy Litzinger (104), Jim Wilkinson (57), Annette Allor (44), Woody Merkle (43), Pam Perna (26), Bill Hill (25), Kevin Heffernan (22), Susan Tucker (22), Kate Reilly (19), Barbara White (18), Janet Lydon (17), David Ryan (16), Mike Riley (16), Sharon Smith (15), Cris Ausin (13), Karyn Dulaney (13), Kaytlin Powell (12), Kurt Schwarz (11), Tina Grot (11), and Robyn Evans (10). Thank you, also, to the other 91 contributors as well. An extra big thank you to Clayton Koonce who submitted 212 reports, 100 more than the second place contributor. Big thank you's also go to the walk leaders: Woody Merkle, Linda Hunt, Kathy Litzinger, and Annette Allor, and to Bob Solem for providing the tools to get the data from emails to a spreadsheet where it can be analyzed, maintaining the photo gallery, and posting trip reports. Finally, a huge thank you to Kathy Litzinger for co-chairing the survey and for helping organize all of the data from the year which is a large and time-consuming task.

Early Season: The first date that a butterfly was seen last spring was February 15th. Annette Allor found a Mourning Cloak at Wincopin Trail. It was the third earliest date that the first identified butterfly of the year was seen during the survey. *A total of 19 butterflies (five Mourning Cloaks, six Eastern Commas and eight Cabbage Whites) were seen in February, including a whopping 14 seen in one day, February 23rd. The previous high number of butterflies seen in the month of February during the survey was three.*



Mourning Cloak
Annette Allor

By the end of February, three species were recorded: Mourning Cloak (Allor 2/15), Cabbage White (Koonce 2/20), and Eastern Comma (many 2/23). By the end of March, two additional species were recorded: Azure species (Koonce 3/2), and Orange Sulphur (Allor 3/22). By April 18th, 19 additional species were recorded including Clouded Sulphur (Litzinger 4/1), Sleepy Orange (Koonce 4/4), Falcate Orange-tip (Wilkinson 4/4), Meadow Fritillary (Hunt 4/5), Eastern Tiger Swallowtail (Heffernan 4/5), Eastern Tailed-Blue (Litzinger 4/6), Question Mark (Litzinger 4/6), Zebra Swallowtail (Buxton 4/8), Juvenal's Duskywing (Koonce 4/11), Wild Indigo Duskywing (Koonce 4/12), Pearl Crescent (Koonce 4/12), Variegated Fritillary (Reilly 4/12), Juniper Hairstreak (Heffernan 4/12), Black Swallowtail (Hun, 4/13), Spicebush Swallowtail (Litzinger 4/13), American Lady (Reilly 4/13), Silver-spotted Skipper (S. Smith 4/16), Horace's Duskywing (Litzinger 4/16), and Red-banded Hairstreak (Wilkinson 4/17).

We did miss Dusted Skipper for the fifth year in a row and Eastern Pine Elfin for the third year in a row. We also missed Spring Azure and Henry's Elfin, each of which have only been seen in one year of the survey.

New Species for the Survey: We had a total of 80 species seen during the first nine years of the survey. The last (two) new species were in 2019: Brazilian Skipper and Dainty Sulphur.



There were three species that were seen in the precursor years of the survey, 2012 or 2013, that had not been seen during the survey itself. Those were Northern Oak Hairstreak, Striped Hairstreak, and Baltimore Checkerspot. Kathy Litzinger found a Northern Oak Hairstreak on June 12, 2023 at Ilchester Elementary school. To give you an idea of the enormity of this sighting, Northern Oak Hairstreak was found in the 1970's and then not again until Kathy found one in her yard in 2012. It was then not seen again for 11 years until Kathy found this one on June 12th.



Northern Oak Hairstreak
Kathy Litzinger

Amazingly, another one was found on June 4th (but reported later) in Mt Airy by Bonnie Bezila. Unfortunately, that one was found deceased shortly after her house was sprayed for insects (not Bonnie's idea). See Facebook post for details. (<https://www.facebook.com/search/top?q=northern%20oak%20hairstreak>).

Another potential new species to look out for: On May 24th, Annette Allor was hiking at Wincopin and found a "very white male Azure. Quoting Annette, "I sent the photo to Harry (Pavulaan) and he thinks it probably is an Appalachian Azure. We cannot say this with 100% certainty though without more investigation and photos of more butterflies. Harry said they can have temporary colonies that come and go." We did not count this sighting by Annette's request. If it is found to be true, it would be the 82nd species found in the survey. To give an idea of the enormity of this sighting, Appalachian Azure was considered rare in 1993 and 2000 and extirpated in 2012. This species uses Black Cohosh as a host plant.



Possible Appalachian
Azure Annette Allor

Peak Years: Seven species had ten year high counts for the survey: Sachem (6037), Mulberry Wing (10), Dun Skipper (70), Mourning Cloak (47), Juniper Hairstreak (36), Harvester (15) and Northern Oak Hairstreak (2). Two species had the second highest count in the ten years, Broad-winged Skipper (16) and Red Admiral (113). Overall, 12.8% of the 70 species found peak or second highest count years.



Juniper Hairstreak
Kathy Litzinger

The 6037 Sachems was the highest count for any species for any year during the survey. The Cabbage White count was 6032 in 2021. Twenty-nine Juniper Hairstreaks were recorded from the spring brood and only seven from the June/July brood. The 15 Harvesters follows last year's total of 14, which is two very strong years in a row. Seventy-one Silvery Checkerspots were found which is three strong years in a row.

Low counts: The following nine species had ten year low counts for the survey: Southern Cloudywing (6), Clouded Skipper (0), Least Skipper (196), Peck's Skipper (287), Tawny-edged Skipper (15), Orange Sulphur (774), American Copper (9), Great Spangled Fritillary (23), and Common Buckeye (145).



Southern Cloudywing
Linda Hunt

An additional ten species had their second lowest count during the survey. These include Juvenal's Duskywing (4), Common Checkered-skipper (14), Swarthy Skipper (3), Zebra Swallowtail (10), Black Swallowtail (52), Variegated Fritillary (238), Question Mark (8), American Lady (23), Red-spotted Purple (36), Common Wood-nymph (3) and Monarch (374).

Overall, 28.6% of the 70 species found had their lowest or second lowest count during the survey.

Clouded Skipper was missed for only the second time during the survey, the last was in 2014. For two species, only a single individual was found, Giant Swallowtail and Tawny Emperor.

Howard County Watch List: Common Checkered-skipper numbers had dropped for five years in a row from a peak of 331 in 2017 to 14 in 2022. In 2023, they rebounded slightly to 20 but this number is still historically low. These are found in higher numbers in the western part of the county where fewer people survey. Their conservation status is S5 (secure) in Maryland but they are on the watch list in this county. American Copper numbers have dropped for six out of the last seven years. This year only nine were counted, down from a peak of 86 in 2016. In the last four years, Great Spangled Fritillary numbers have dropped from 168 in 2018 to 39 (2019), 45 (2020), 32 (2021) and a low of 23 in both 2022 and 2023. These numbers reflects regional trends and could be global warming related (disrupted timing of caterpillar emerging from diapauses and violet emergence). Tawny-edged Skipper numbers averaged 139 individuals reported each year during the first five years of the survey to 49 individuals each year in the last five years. In 2023, the number reported was 15. Monarch numbers averaged 959 individuals counted per year between 2016 and 2021. The number reported was 374 in 2023. This is only one year so it is not a real concern yet, but, because it is the Monarch, it is worth pointing out.

Of the 70 species found this year, 18 (~26%) had <10 individuals reported. These include American Copper (9), Question Mark (8), *Hackberry Emperor* (8), White M Hairstreak (7), Pipevine Swallowtail (6), American Snout (6), Southern Cloudywing (6), Northern Cloudywing (5), *Crossline Skipper* (5), *Northern Broken Dash* (5), *Common Sootywing* (4), *Swarthy Skipper* (3), *Common Wood-Nymph* (3), Juvenal's Duskywing (3), **Northern Oak Hairstreak** (2), *Long-tailed Skipper* (2), *Giant Swallowtail* (1), and *Tawny Emperor* (1). Nine of these (italics) were also on last year's "<10 individuals" reported list. One in bold was not seen last year. The other eight were not on last year's list.



Common Sootywing
Pam Perna

New Early and Late Dates: There were eleven new early dates established this year. These were Sleepy Orange (4/4), Meadow Fritillary (4/5), Red-banded Hairstreak (4/17), Northern Cloudywing (5/14), Hobomok Skipper (5/15), Viceroy (5/18), Common Sootywing (5/19), Northern Pearly Eye (5/21), Harvester (5/22), Dun Skipper (5/25) and Northern Oak Hairstreak (6/4). There were also eleven new late dates recorded this year. They were: Northern Oak Hairstreak (6/10), Appalachian Brown (9/2), Southern Broken-dash (9/15), Broad-winged Skipper (9/19), Great-spangled Fritillary (10/3), Wild Indigo Duskywing (10/26), Zabulon Skipper (10/26), Silver Spotted-Skipper (10/28), Black Swallowtail (11/4), Painted Lady (11/13), and Monarch (11/22). The Early – Late date spreadsheet will be updated this winter.

Notes from the year:

- One new species was seen this year, Northern Oak Hairstreak. That brings the species count for the survey to 81.
- The 15 Harvester butterflies seen this year exceeds the total seen during the seven years between 2015 and 2021.
- The Sleepy Orange found by Clayton Koonce on April 8th was the winter form indicating that it had overwintered in the county.
- On March 26th, Annette Allor found eight Eastern Commas in a single tree. Amazing.
- Annette also found 16 Juniper Hairstreaks at Mt Pleasant on April 17th.
- Andrea Cochran found a Monarch ovipositing on milkweed on April 24th which is interesting because the milkweed is barely out of the ground at that time.
- The single Giant Swallowtail was seen by John McKitterick. They seem to be very attracted to the lantana in his yard.
- We have all been told that Monarch caterpillars only eat the leaves of milkweed plants. Annette Allor, however, has seen them eating milkweed flowers and was able to get a video to prove it. https://www.youtube.com/watch?v=5_b5Ue6eO9g.
- Annette Allor found a Gray Hairstreak caterpillar on Partridge Pea at the Shrine of Saint Anthony's on October 4th. This, to my knowledge, is a first for the survey.
- Monarch numbers dropped from 928 in 2022 to 374 in 2023. This is the second lowest number in the ten year survey and is worth watching going forward.
- We again conducted seven butterfly walks this year, six at Mt Pleasant and one at the Elkhorn Garden Plots.
- The top ten contributors (out of 113) accounted for ~66% of the surveys submitted.
- See the presentation to be given at the April bird club meeting for more information about the 2023 butterfly year
- Banded Hairstreak dropped from 51 in 2022 to 11 in 2023.
- Spotted Lanternflies were found in numbers in the county for the first time this year.
- Harvester is always a tough butterfly to find. Sometimes they find you. This one found Heidi Osterman's hand.



Sleepy Orange
Clayton Koonce



Gray Hairstreak caterpillar
Annette Allor



Harvester
Heidi Osterman

Butterfly of the Year: Each year we award a "Butterfly of the Year" to a species that had an outstanding year. This year the award goes to the Northern Oak Hairstreak, the new species for the survey. Two of these butterflies were found, only the second and third individuals of this species recorded since the 1970's. Congratulations to Kathy Litzinger and Bonnie Bezila for these finds. Details of these sightings are given above.

Last Butterfly of the Year Contest: We again had the "Last Butterfly of the Year" contest with the winner receiving a "Butterflies of the Mid-Atlantic" field guide. The winner this



Orange Sulphur
Jim Wilkinson

year was Jim Wilkinson who sent in a photo of an Orange Sulphur seen at Meadowbrook Park on December 8th. Congratulations Jim.

Photos and Videos from participants: This year we, once again, have received many excellent photos of butterflies. Some of the photos are proof of a sighting. Others are to request help with an ID which we enjoy receiving. Please do not hesitate to reach out with a request for an ID. Some of the photos we receive are simply eye-popping. Many of these photos will be in the Power Point presentation given at the April Bird Club meeting.

New Data / Tools for the Butterfly Survey: In the ten years that the butterfly survey has been taking place, you surveyors have reported over 215,000 butterflies. With this vast amount of data, we were able to publish flight times, early and late dates, and overwintering strategies for each of the 81 species that we have found. These are all on the Howard County Bird Club website. They are in pdf format and can be downloaded to your phone for use in the field.

What you can do to help butterflies:

- Provide a Pocket Habitat for butterflies
- Plant a native plant pollinator garden and landscape for caterpillars
- Leave the leaves
- Reduce the size of your lawn (or mow less frequently)
- Reduce mosquito spray and insecticide usage
- Get rid of invasive plants
- Embrace the wild in your garden



Clouded Sulphur
Annette Allor

Another big thanks to all of you for another very successful year for the Howard County Butterfly Survey. Keep your eyes open. By the time that this newsletter is sent out, we should have already seen the first butterfly of 2024.



Hobomok Skipper
Annette Allor



Silvery Checkerspot
Kathy Litzinger



Common Buckeye
Annette Allor



Hackberry Emperor
Kurt Schwarz