

Maryland Biodiversity Project Highlights - 2022



Overview

MBP's 10th anniversary was a year of celebration and unprecedented progress. We continued the Turkey Point Bird Count and added a second count at Dans Rock in Allegany County. We held an incredible 10-year anniversary celebration and our first major BioBlitz since before the COVID-19 pandemic. We continued our robust integration with iNaturalist and made major improvements to the website. We worked with collaborators to put the data to use for science, conservation, and outreach. We significantly increased the number and variety of field trips, which are now featured on our MBP blog. We permanently archived more than 200,000 images in 2022 alone.

Highlights

MBP's 10th Anniversary Celebration

We had an incredible time celebrating the community we've built together and all the great work we've accomplished. What a memorable gathering of renowned naturalists and conservationists, who might not have had such an occasion to celebrate that night and to collaborate so regularly without this project. We enjoyed honoring a long list of distinguished contributors and awarding Roshan Vignarajah the first MBP Young Naturalist of the Year award.



Young Naturalist of the Year Roshan Vignarajah among family and friends at the MBP anniversary celebration

MBP Bird Counts

We had a successful second year at the Turkey Point Bird Count and added a second fall migration count at Dans Rock in Allegany County! Our lead counters Carl Engstrom and Jonathan Irons - along with our excellent alternate counters - did a fabulous job. They tallied well over 300,000 birds and documented many noteworthy trends and counts.

Dans Rock Bird Count (2022)

- Dans Rock project page at MBP:
<https://www.marylandbiodiversity.com/project/dansrock/viewDansRock2022.php>
- Dans Rock Trektellen 2022 summary:
<https://www.trektellen.org/site/totals/3411/2022>
- Blog posts from the lead counter, Carl Engstrom:
<https://marylandbiodiversity.com/blog/?author=7>

Turkey Point Bird Count (2022)

- Turkey Point project page at MBP:
<https://www.marylandbiodiversity.com/project/turkeypoint/viewTurkeyPoint2022.php>
- Turkey Point Trektellen 2022 summary:
<https://www.trektellen.org/site/totals/3157/2022>
- Blog posts from the lead counter, Jonathan Irons:
<https://marylandbiodiversity.com/blog/?author=3>



Recognizing our amazing lead counters to date: Daniel Irons (left, Turkey Point, 2021), Carl Engstrom (center, Dans Rock, 2022), Jonathan Irons (right, Turkey Point, 2022)

BioBlitz

The Marshy Point Nature Center and the Maryland Biodiversity Project hosted a BioBlitz at Marshy Point Nature Center in Baltimore County in June 2022. A great mix of experts and novices explored the meadows, forests and wetlands along Dundee and Saltpeter Creeks. It was a fun and productive effort, and included many guided walks for the public. We documented more than 700 species in 24 hours! Explore the BioBlitz results here in this [iNaturalist project](#).

MBP field trips and the field trip blog

As part of MBP 10th anniversary celebrations, we worked together to significantly ramp up field trips in both numbers and diversity. We continued to offer a variety of all-day field trips around the state, but also to create more specialized trips, such as Bonnie Ott's bolas spider search and a terrestrial isopod focused trip by Dave Webb.

2022 also marked the 1-year anniversary of the MBP blog, which has been a major extension of our outreach (thanks, Jacqueline!). You can explore the blog to see upcoming trips, trip reports, special project pages, and more. We plan to continue to expand this resource in 2023.



The screenshot shows the Maryland Biodiversity Project website. At the top, there is a navigation menu with links for MBP, HOME, SPECIAL PROJECTS, and MBP FIELD TRIPS. A search bar is located on the right side of the header. Below the navigation, there are two article cards. The first card is titled "Updates from the Turkey Point Morning Flight Count – 11/30/22" by Jonathan Irons, dated December 8, 2022. It features a photograph of several birds in flight against a blue sky. The second card is titled "Second Half of November at Dans Rock" by Carl Engstrom, dated December 2, 2022. It features a photograph of a single bird in flight against a light blue sky. To the right of the article cards, there is a "Categories" section with a list of links including "Bird count updates from Alt Counters 2022", "Bird count updates from Carl Engstrom 2022", "Bird count updates from Daniel Irons 2021", "Bird count updates from Facebook 2021", "Bird count updates from Jonathan Irons 2022", "Dans Rock Bird Count 2022", "Field Trip List", "Field Trip Reports", "MBP Field Trips", "MBP Updates", "Previous", "Special Projects", "Turkey Point Bird Count 2021", and "Turkey Point Bird Count 2022". Below the categories is an "Archives" section with links for "December 2022", "November 2022", and "October 2022".

MBP shirts galore

Jim and Colleen facilitated our first two Bonfire shirt fundraisers, which were very successful. This approach is exciting because we can offer shirts in more styles and colors and share them more easily with our growing community. Both events offered high quality MBP 10th Anniversary shirts, first t-shirts and then long-sleeved tees and hoodies. We raised over \$3,000 for the fall bird counts! We also produced a small run of Maryland Plant Atlas t-shirts.

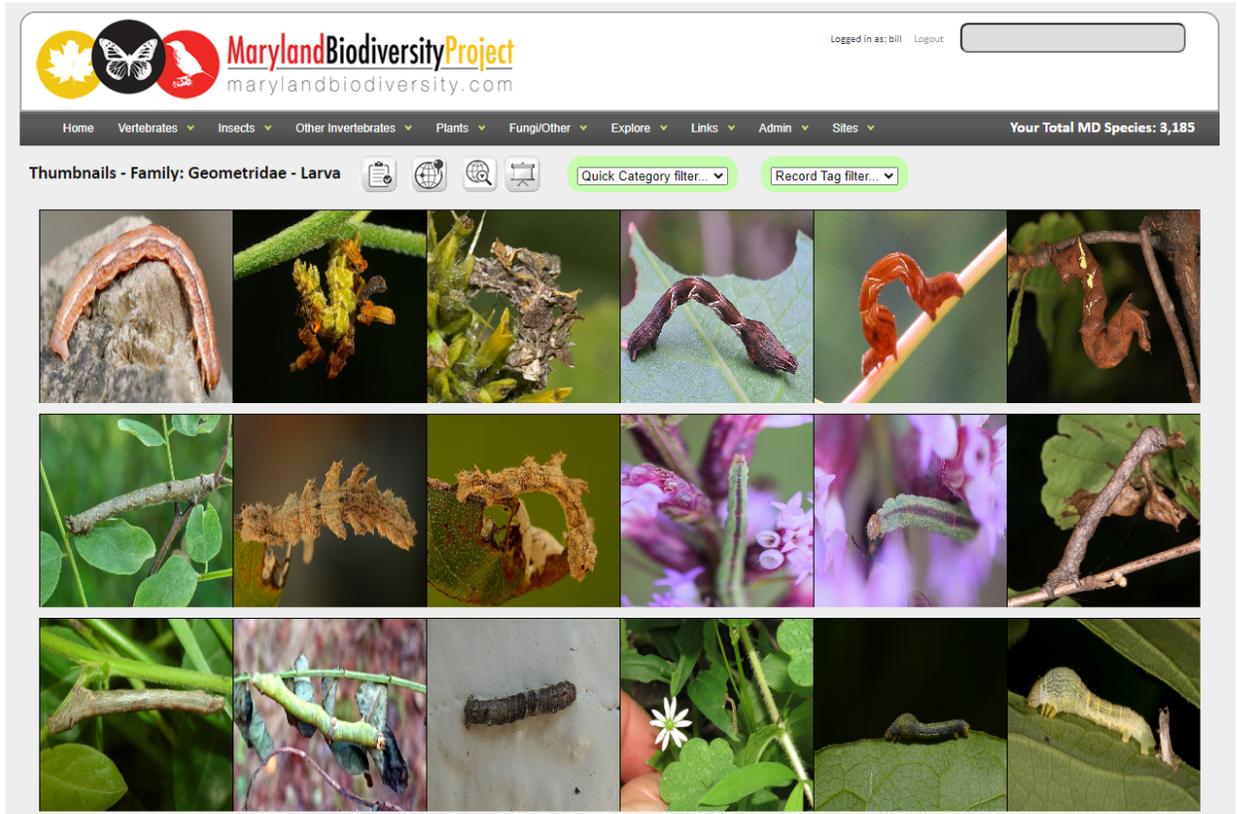


New features

On the technical side, we expanded the MBP blog and special project pages, added record tagging and filtering (e.g., filter by caterpillars or flowering plants), and continued refining our close integration with iNaturalist. Together we permanently archived more than 150,000 new records and more than 200,000 photos. We are closing in on one million records archived at the project! The following are selected technical highlights and new functionality:

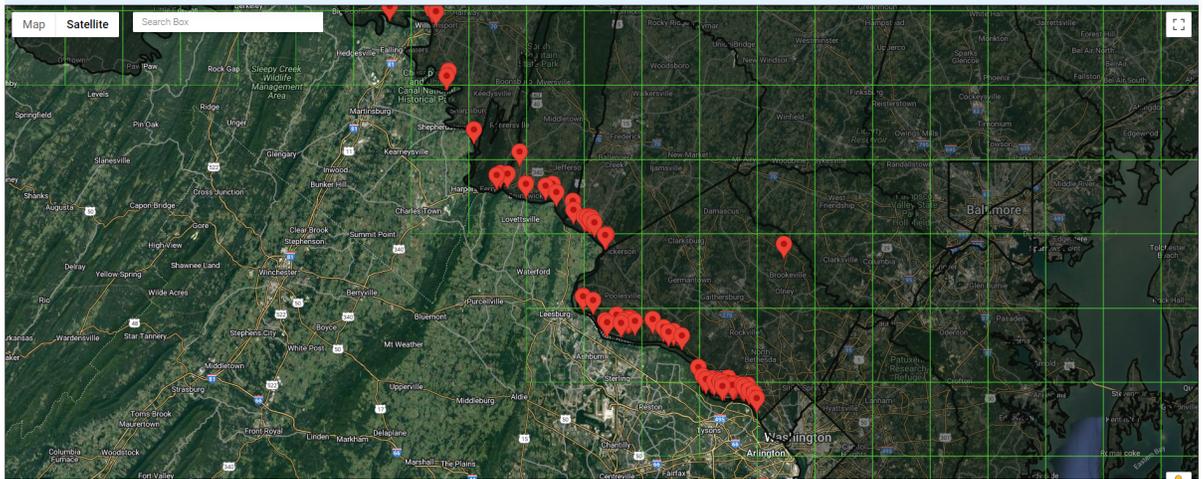
- Record tagging for details such as “flowering”, “fruiting”, “adult”, “juvenile”, “pupa”, “larva”, “female”, “male”, and so on. This includes automated ingest of those tags via iNaturalist and via the manual addition of records and final review process at MBP.
- Added record filtering to the Seasonality functionality.

- Added record filtering to the Thumbnails pages. Image below shows geometer moths (Family: Geometridae) filtered by the tag “larva” (caterpillars).



- Checklist and county records pages now feature record totals, which can be extremely helpful in considering the likelihood of a given species sighting.
- Added full support for audio files, including ingest via our iNaturalist process. Overhauled our media handling to standardize our support for ingest, archival, and presentation of photo, audio, and video files.
- Added links to NatureServe from MBP taxon pages. This was on our TODO list for a while because it requires an API-driven lookup service at page load.
- Upgraded the “New Stuff Report” to be faster and more mobile-friendly.
- Improved our autocomplete searches for special name cases like undescribed species.
- Began the process of a website overhaul for mobile-first / mobile-friendly presentation. We released a number of new mobile-friendly pages that look great on a phone or other mobile device. We created a template to facilitate moving more pages to that design.

- We created new mapping tools using Google Maps and the 3D mapping tool CesiumJS for internal review by admins and stakeholders under appropriate use cases.



- Redesigned species pages (pending release), making them “responsive” (i.e., mobile-friendly) and adding key new features such as “Focus on ID”.
- We reached the **half million images archived** milestone in January 2022 and we wrap up the year over 700,000!

iNaturalist Integration

We continued to refine our game-changing integration with iNaturalist and dramatically increased our data ingest efficiency.

- Check out a summary of [results so far](#) (this page is new as well!)
- We added more robust support for processing records of Maryland’s undescribed species, the large number of taxa that are new to science
- Continued tuning MBP ingestion of iNaturalist data, to include rules such as when records are already ingested, but later become invalid due to flags such as location inaccuracy or the captive/cultivated flag

Supported research and conservation

Here are some representative highlights:

- Collaborated with Wes Knapp and Rob Naczi on keeping our plant checklist in sync with their *Vascular Plants of Maryland* and suggesting candidates for addition.

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- Collaborated with Maryland Department of Natural Resources (DNR) Natural Heritage Program (NHP) regarding an enriched plant checklist to facilitate more complete sync with NatureServe on regional/continental conservation status. Added useful fields to facilitate reviews of S-rankings and relative abundance (e.g., quad count, county count, etc.).
 - Explored opportunities to assist MD DNR NHP via new workflows, data-sharing, visualizations, and automation.
 - Supported Antioch University New England and MD DNR NHP with Diamond-backed Terrapin data for creation of a distribution model.
 - Collaborated with MD DNR NHP about Wood Turtle and Spotted Turtle data to support state conservation efforts.
 - Supported MD DNR NHP with Atlantic White Cedar occurrence data.
 - Shared selected data with St. Mary's College for a research project.
 - Collaborated regularly with experts from around the world on updates to taxonomy, known ranges, host plants, and much more.

Data Mining

We continued to emphasize species-level content, adding status and relationship information (e.g., host plants) for hundreds of species. Tim Reichard reviewed and added content for nearly 30 [undescribed moth species](#). We added common names for dozens of species, including all the plume moths and dozens of species of Diptera and Hymenoptera.

Social Media

Biodiversity-focused outreach remains a high priority for MBP!

- We shared hundreds of Maryland natural history posts on social media via Facebook (<https://www.facebook.com/MarylandBiodiversity>), Twitter (<https://twitter.com/MDBiodiversity>), and Instagram (<https://www.instagram.com/mbiodiversity/>).
- The MBP [Facebook](#) page reached 15,000+ followers! (15,023)
- [Instagram](#) outreach reached 1,830 followers.
- [Twitter](#) has 655 followers.
- We added an MBP LinkedIn page (<https://www.linkedin.com/company/maryland-biodiversity-project/>).

The MBP Board

The MBP Board works to ensure we do the most good in accomplishing our mission, which is to catalog the living things of Maryland. We promote science, conservation, and education by helping to build a vibrant nature study community. The MBP Board is made up of Jim Brighton (president), John Hall (secretary), Bill Hubick (treasurer), Maren Gimpel, Jane Hill, Dan Small, and Mike Walsh.

By the numbers - 2022

- New records in 2022: **159,398**
- Photos added in 2022: **212,349**

By the numbers - All Time

- Species/taxa featured: **20,686**
- Species with photos: **12,993**
- Total Records: **862,339**
- Total Photos: **705,855**
- Contributors: **19,210**

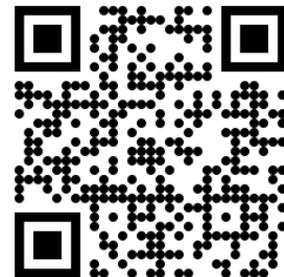
Thank you!

As always, thank you to our incredible community of contributors, editors, and supporters.

Donations

There is no better time to collect biodiversity data for conservation than right now. With your help, we can keep growing this amazing project and community. Thank you!

<https://www.marylandbiodiversity.com/donate>



Cover Photo Credit

Cover photo of MBP field trip to C&O Canal and Ferry Hill by trip leader John Hall.