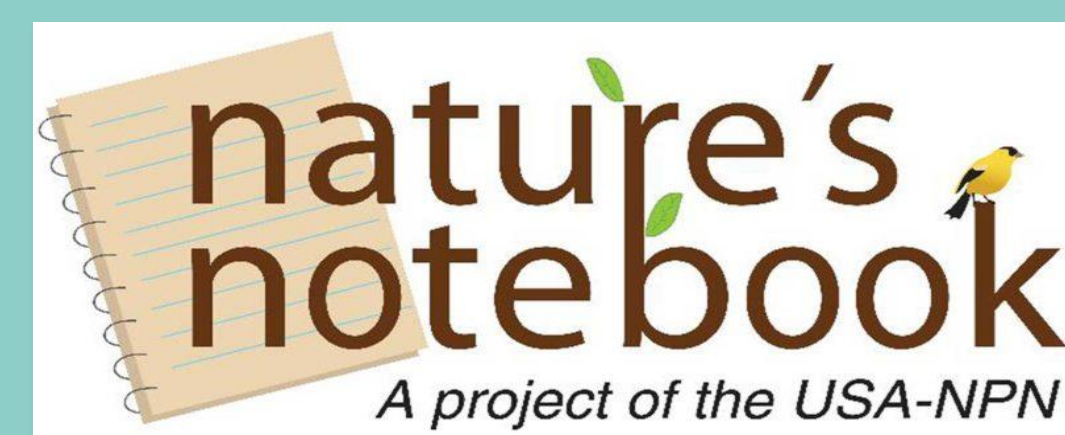


The Downeast Phenology Trail: A Snapshot of Citizen Science in Acadia National Park and Beyond

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The Project

The Downeast Phenology Trail (DPT) is a citizen science project that tracks the phenology of plant species in the Downeast region of Maine. Phenology, or nature's calendar, is the study of plant and animal life cycle events-including fruiting of plants, emergence of insects, and bird migrations. The project is a partnership between Schoodic Institute, Acadia National Park, Downeast Lakes Land Trust, Blue Hill Heritage Trust, Island Heritage Trust, Fields Pond Audubon Center, Petit Manan National Wildlife Refuge, Great Pond Mountain Conservation Trust, and Frenchman Bay Conservancy. DPT uses three citizen science tools, Nature's Notebook, iNaturalist, and eBird to help answer scientific research questions tracking changes in phenology and their relation to climate change in Downeast Maine.



used to record phenology of plant species thought time to understand how it is changing



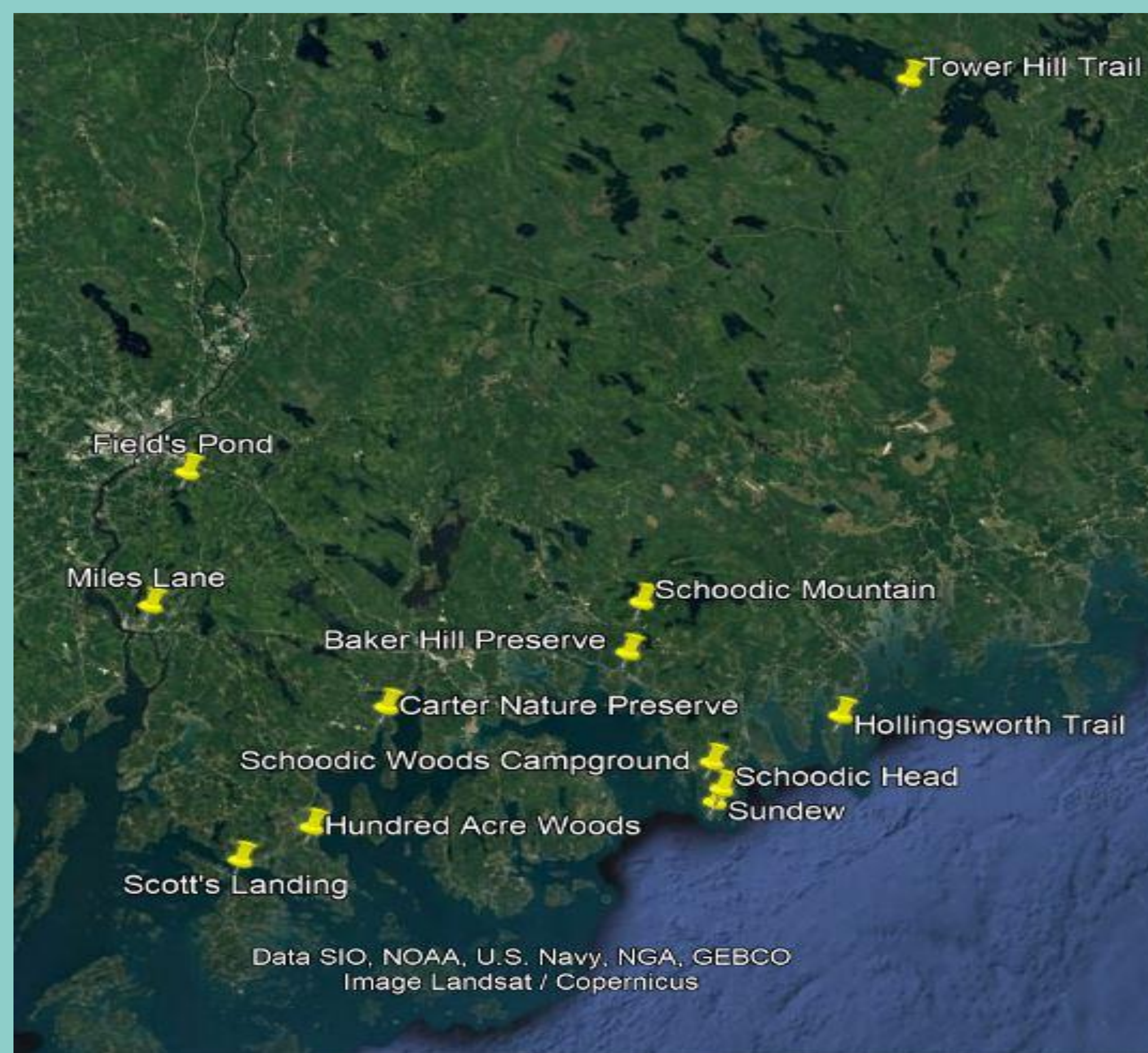
used to catalog biodiversity allowing us to understand what is seen where and when



used to capture bird observations to understand when birds are where and what are they going

Project Goals

- To offer opportunities for local organizations and their volunteers to engage in science and research to learn about the importance of citizen science.
- To create a sustainable phenology monitoring network that establishes a long-term dataset that can be used to answer scientific questions and to help with management decisions and conservation goals.



Map 1: Downeast Phenology Trail Network

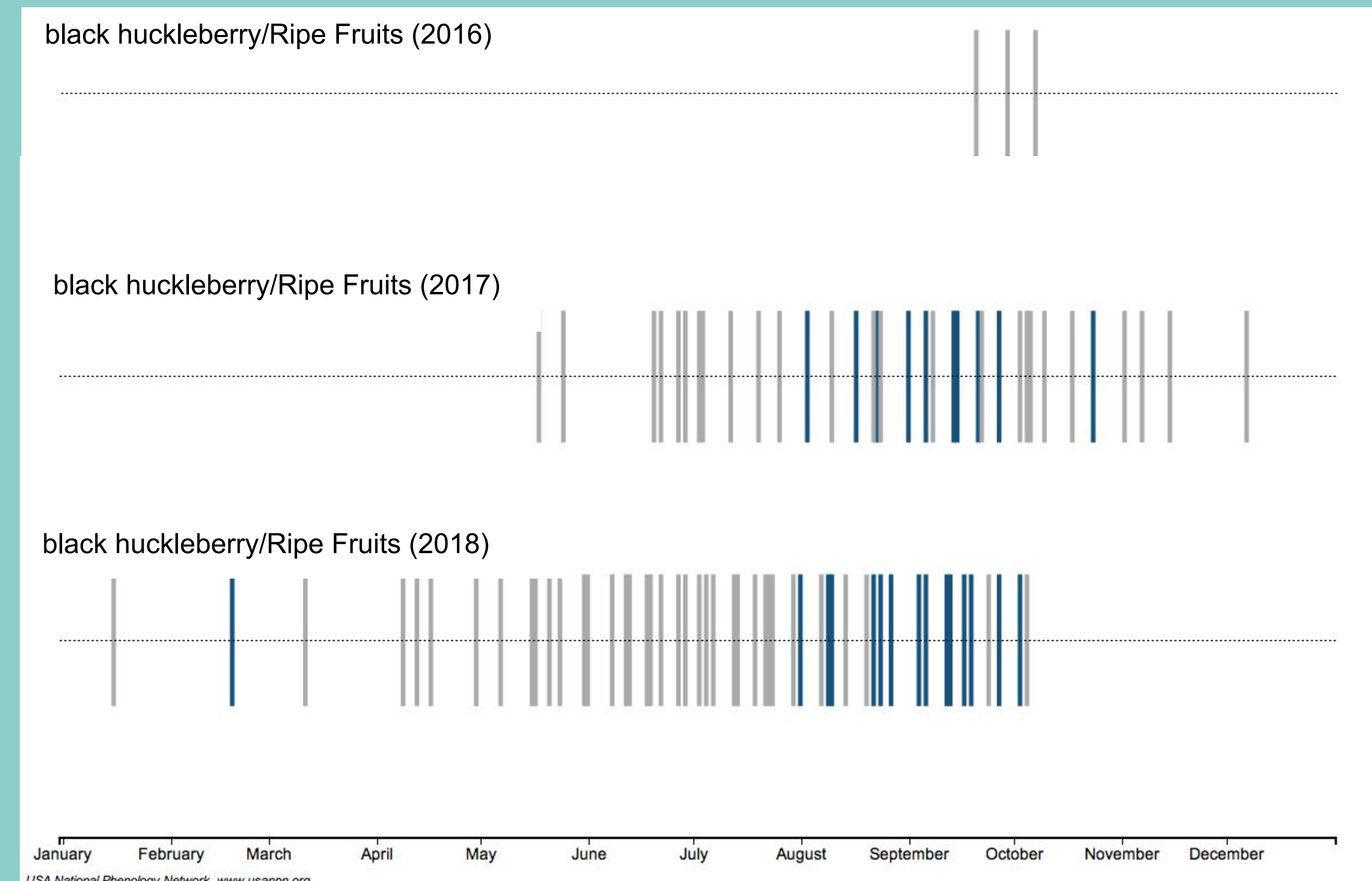


Figure 1: Calendar for black huckleberry ripe fruits for 2016-2018 where the blue bars represent presence of the phenophase, gray bars represent absence of the phenophase and white spaces means no data was collected.

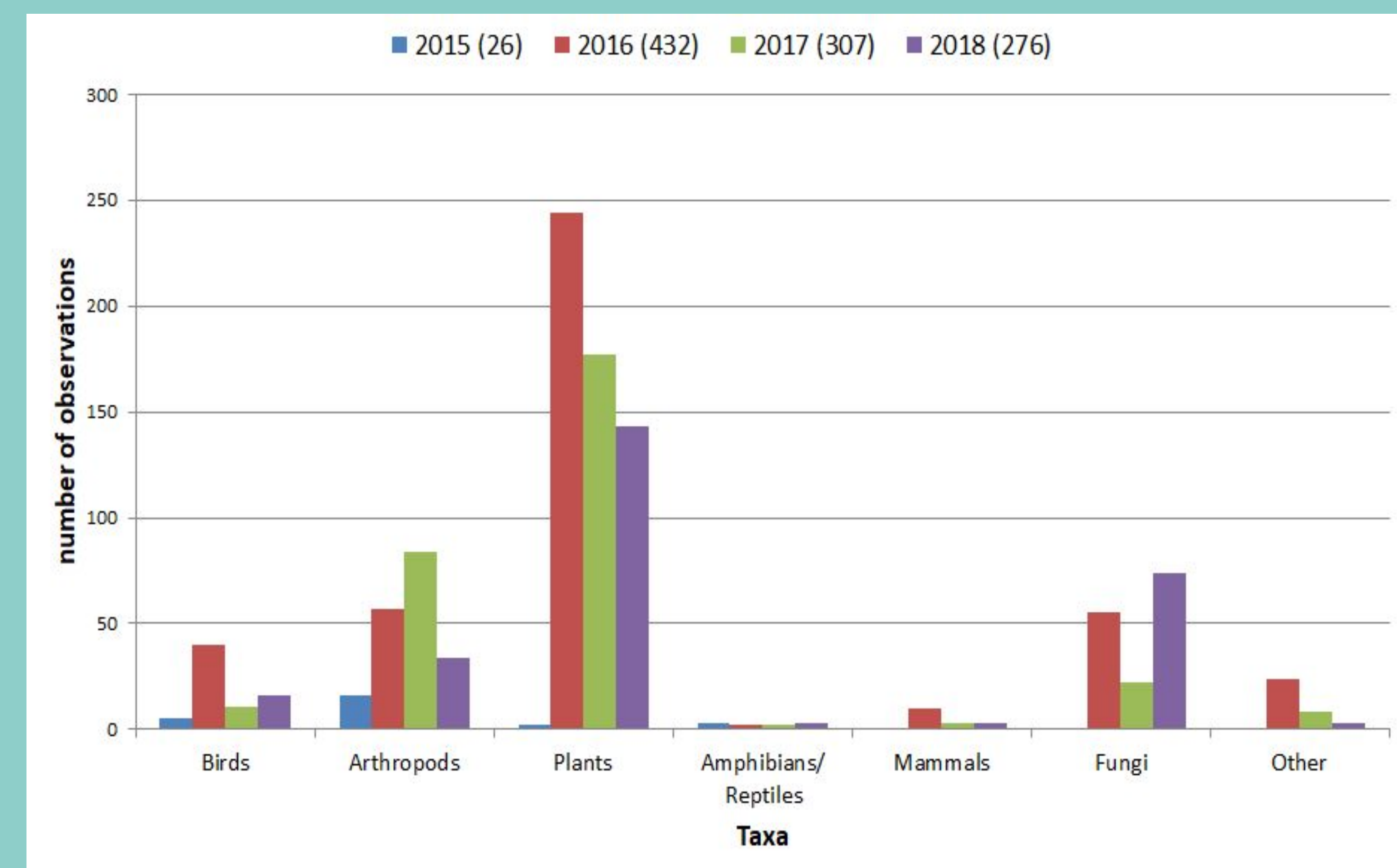


Figure 2: Number of iNaturalist observations per taxa for 2015-2018 field seasons.

Our Research Question

Millions of songbirds migrate south every fall along the northeast coastline. As they travel the long distances needed to reach their southern destinations they need stopovers where they can refuel on fruits and insects. As the climate changes in Downeast Maine, temperatures are increasing. As things heat up, the timing of fruits ripening and insects emerging is happening earlier and earlier. But, as things heat up, birds are flying south at the same time or later and later. Is climate change creating a phenological mismatch with migratory songbirds and their food sources?



Acknowledgments:

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Next Steps & How You Can Help

- Build a volunteer base to collect weekly data
- Train volunteers in the necessary apps
- Incorporate ebird more into the project
- Collaborate with new/existing partners to add more trails

Find one of our trails near you and a volunteer. Use just one app or use all three the choice is up to you

- Record phenology data using Nature's Notebook
- Submit birding checklists using eBird
- Capture biodiversity using iNaturalist

Check out our website:

<https://www.schoodicinstitute.org/about/project-phtom/>