



Many species, including Eastern Wood-Pewee, whose populations have declined in Vermont by 35% over the last 25 years, may benefit from bird-friendly maple management.

© ANDY REAGO & CRISSY MCCLARREN

Is Bird-friendly Maple Sweet for Birds?

VCE partners with Audubon Vermont and UVM to test forest management guidelines for maple producers

BY STEVE FACCIO

You've likely heard of "bird-friendly" coffee, but how about bird-friendly maple? Forests that produce maple syrup can be managed in very different ways—some of which may provide better habitat for birds than others. In a new partnership with Audubon Vermont and the University of Vermont, VCE is spearheading a two-year study that will test whether the management recommendations of Audubon Vermont's Bird-friendly Maple Project produce measurable benefits for birds compared to a more traditional approach of sugarbush management.

Traditional sugarbush management



techniques focus on maximizing sap production. This frequently results in park-like, closed-canopy monocultures of mature sugar maple with little to no understory. This lack of plant diversity and habitat structure may reduce the forest's value for birds and other wildlife, and, as any gardener knows, monocultures tend to be more susceptible and less resilient to disease and pests.

To address these issues, Audubon Vermont's Steve Hagenbuch, in partnership with the Vermont Department of Forests, Parks, and Recreation and the Vermont Maple Sugar Maker's Association, initiated the Bird-friendly Maple Project to promote sugarbush



© SUSAN HINDINGER

The question our two-year study aims to answer is this: Do these management guidelines actually result in measurable benefits to the bird community compared to traditionally managed sugar bushes or unmanaged forests?

management practices that strive to improve forest habitat value, native plant diversity, and long-term productivity. As Hagenbuch points out, “The future of Vermont’s forest health, bird populations, and maple sugaring industry are tightly linked—the same northern hardwood forests that supply nearly one-half of our nation’s maple syrup each year also support some of the highest diversities and abundances of breeding birds in the continental United States.”

Moreover, results from VCE’s Forest Bird Monitoring Project revealed that many of these birds, including Canada Warbler, Veery, and Eastern Wood-Pewee, have experienced population declines in Vermont forests over the last 25 years. Stressors associated with climate change, forest fragmentation, invasive species, and incompatible forest management practices are contributing threats to forest birds. These same factors also threaten the sustainability of maple sugaring at a time when the industry is expanding rapidly. Since 2015, maple production in Vermont has increased by 40%, and this steady growth is predicted to continue for the foreseeable future. As a consequence, more and more forestland is being managed for maple production—potentially

in ways that degrade habitat for birds (and biodiversity in general), while negatively impacting ecosystem services delivered by working forests.

Audubon’s Bird-friendly Maple Project works with participating maple producers to sustainably manage their forests for birds *and* sap. In exchange, they receive promotional materials that allow them to uniquely market their syrup as “bird-friendly.” Specifically, Audubon’s management guidelines recommend increasing the diversity of canopy tree species and forest structure by ensuring a range of age classes from seedlings to large trees. This, in turn, encourages forest regeneration, creates a variety of complex forest layers, and promotes long-term health, resiliency, and sustainability of the sugarbush.

The question our two-year study aims to answer is this: Do these management guidelines actually result in measurable benefits to the bird community compared to traditionally managed sugarbushes or unmanaged forests?

Beginning this summer, we will address that question by quantifying birds and their invertebrate prey in three different forest treatments: 1) sugarbush stands that meet Audubon’s criteria, 2) sugarbush stands managed as maple monocultures, and 3) unmanaged forest stands. Additionally, our study will be part of a larger project by University of Vermont professors Brendan Fisher, Tony D’Amato, and Rachele Gould, who will not only investigate how the intensity of maple sugar production affects biodiversity, but will assess its impact on ecosystem services (such as carbon sequestration and resistance to invasive species) while investigating the socio-economic outcomes of maple production at different scales. Ultimately, we hope the results will help improve Audubon’s sugarbush management guidelines and advance biodiversity conservation in Vermont’s working forest landscape. Stay tuned for updates on this sweet project! **FN**

You don’t need a background in science to be a Citizen Scientist!

From backyards and bogs to mountains and meadows, you’ll find many ways to get involved and make a real contribution to wildlife conservation. If you’d rather not muck around a swamp or hike to a summit, you can still volunteer for VCE—even from the comfort of home.

We hope you’ll join us!

iNaturalist Vermont

Volunteers share observations of all Vermont biodiversity in this digital project of the Vermont Atlas of Life.

www.inaturalist.org/projects/vermont-atlas-of-life

Mountain Birdwatch

Each June, volunteers hit the trails to complete bird survey routes on 123 mountain ridgelines across the Northeast.

vtecostudies.org/projects/mountains/mountain-birdwatch

Vernal Pool Monitoring

In April, May, and September each year, volunteers visit and collect data to monitor “adopted” vernal pools following protocols and using using VCE-provided equipment.

vtecostudies.org/projects/forests/vernal-pool-conservation

To learn more about the Vermont Atlas of Life and its projects, visit vtecostudies.org/volunteer