

Managing for Young Forest Habitat in Post-Agricultural Settings to Support Winged- Warblers

FEMC Conference: December 12th, 2024

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Agenda:

- Context
- “Origin” of Partnership with Audubon Vermont
- Habitat Management & Population Monitoring
- Where We’re At Now

Context

Bird Population Declines

- Since 1970, “more than 1 in 4 birds in the U.S. and Canada have disappeared” (Alexson, 2019).
- Shrubland birds are included in this decline (Audubon Vermont, n.d. (a)).

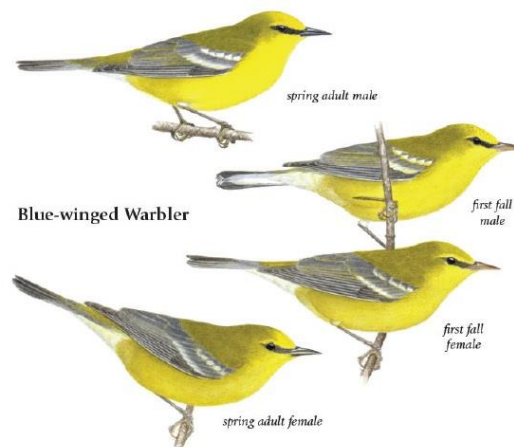


Image credit © TNC Staff (2019)



Graphic Credit © Jillian Ditner (Alexson, 2019)

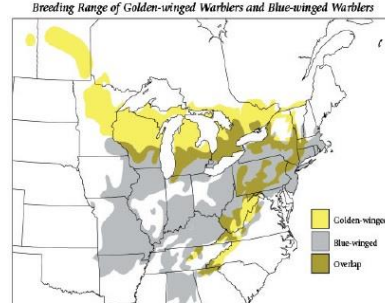
Winged-Warbblers



Blue-winged Warbler

Golden-winged Warbler Atlas Project

a partnership between volunteer birders and professional biologists devoted to the conservation of Golden-winged Warblers, a Neotropical migrant that is declining nearly throughout its range.




Adapted from: A Field Guide To Warblers of North America

www.birds.cornell.edu/gowap


Cornell Lab of Ornithology
Ithaca College
Partners in Flight
National Fish and Wildlife Foundation
United States Fish and Wildlife Service

The Cornell Lab of Ornithology ITHACA

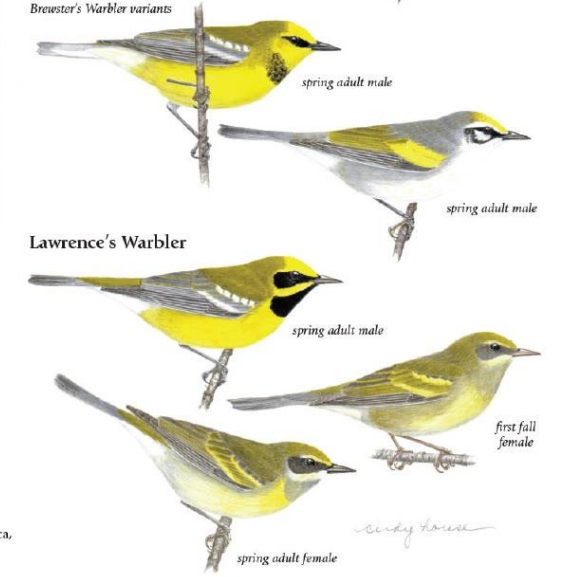
Illustrations of warblers by Cindy House, reprinted with permission from The Peterson Field Guide Series: A Field Guide To Warblers of North America, Houghton Mifflin Co., 1997



Brewster's Warbler



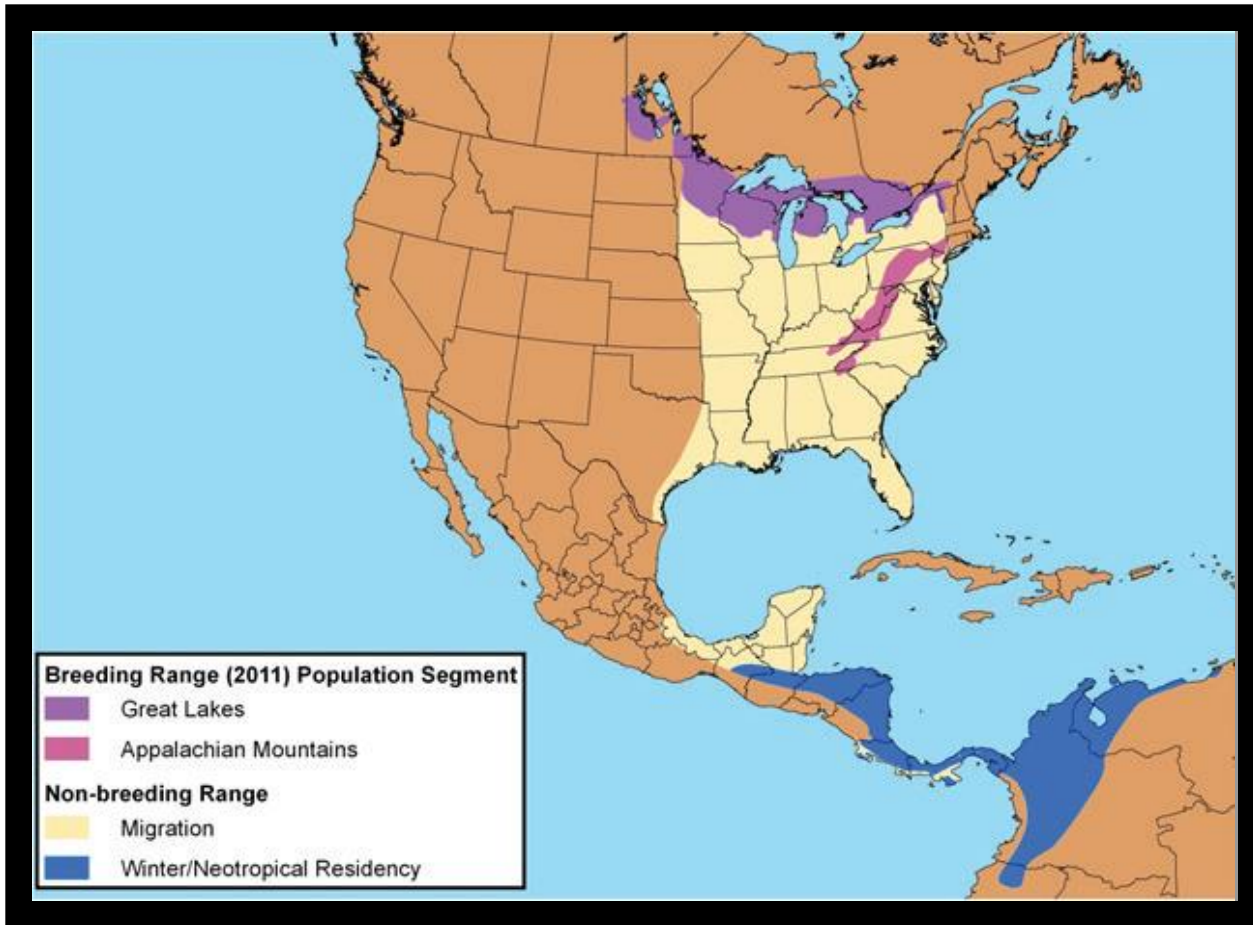
Golden-winged Warbler



Lawrence's Warbler

Cindy House

Winged-Warbler Status



Map credits © Roth et al., 2019

“In recent decades, the golden-winged warbler population has fallen by 70 percent across the species’ North America range, with an average 7 percent annual decline in Vermont over the last 25 years.”

Mark LaBarr (2016), (Audubon Vermont (n.d. (b)))

Challenges:

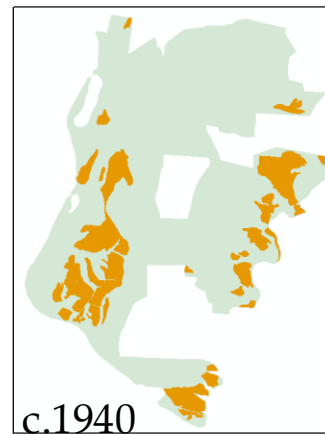
- Migratory obstacles
- Climate change
- Disease & predation
- Brood parasitism
- Interactions between Blue- and Golden-winged warblers
- Development & land use change (including natural succession/ regime change)

(Roth et al., 2019, pp. 29-33)

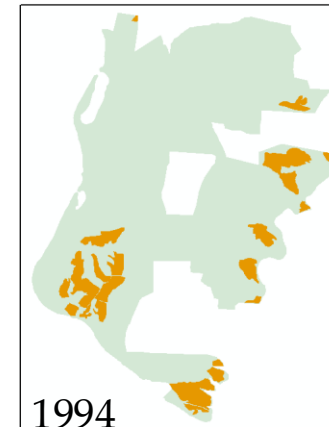
Winged-Warblers in Vermont

“The Golden-winged Warbler is dependent on dynamically changing forested landscapes in which disturbance patterns create patches of regenerating forest dominated by shrubs, small trees, and a grassy herbaceous layer” (Roth et al., 2019, pp. 5).

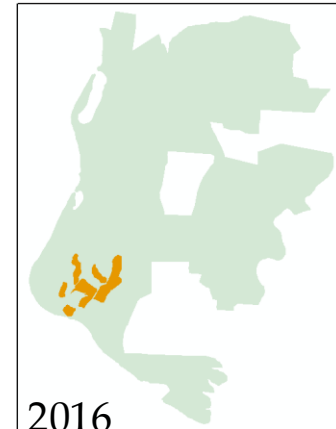
- **78% of Vermont’s land base is forested** (Vermont Forests, Parks and Recreation, n.d.).
- **As of 2017, farmland accounts for 20.2% of Vermont’s land base** ([USDA] Economic Research Service, 2024).



Active Ag. Fields
560 ac, 15% cover



Active Ag. Fields
345 ac, 9% cover



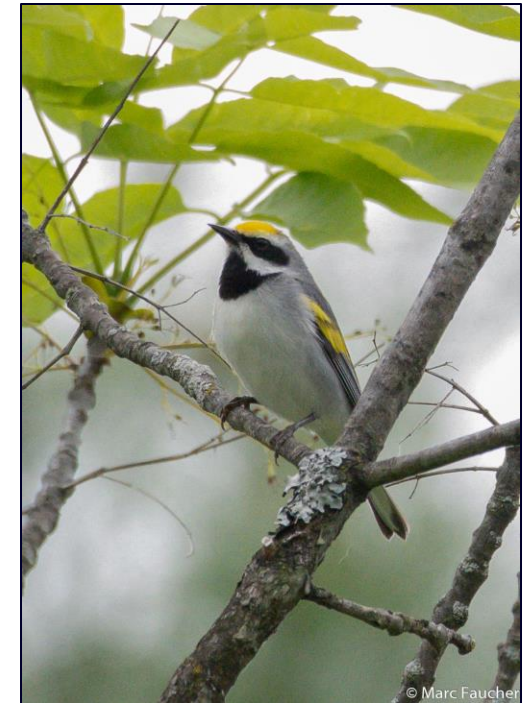
Active Ag. Fields
80 ac, 2% cover

Partnership with Audubon

Audubon Vermont's Conservation Program



Audubon Vermont's Conservation team applies science-based, on-the-ground, and scalable conservation solutions to the challenges facing birds and bird habitat. Key bodies of work include habitat restoration and stewardship, priority bird protection, and monitoring.



Slide and Picture Credits © Mark LaBarr/Audubon VT

The "Spark"

Ted Murin

- 2014 Google Earth analysis & historical research
 - Identified TNC's Helen W. Buckner Memorial Preserve at Bald Mountain
- 2-3 day exhaustive on the ground survey

Map Credits © Ted Murin (2014)

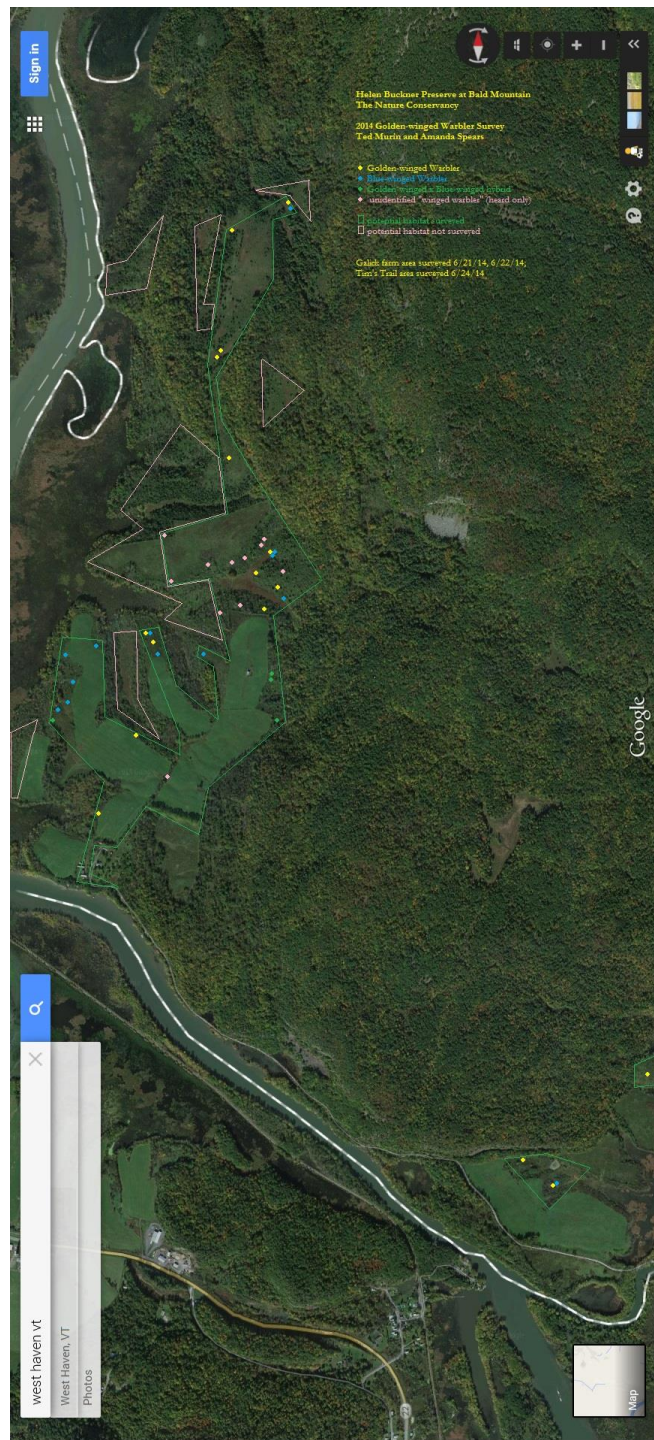
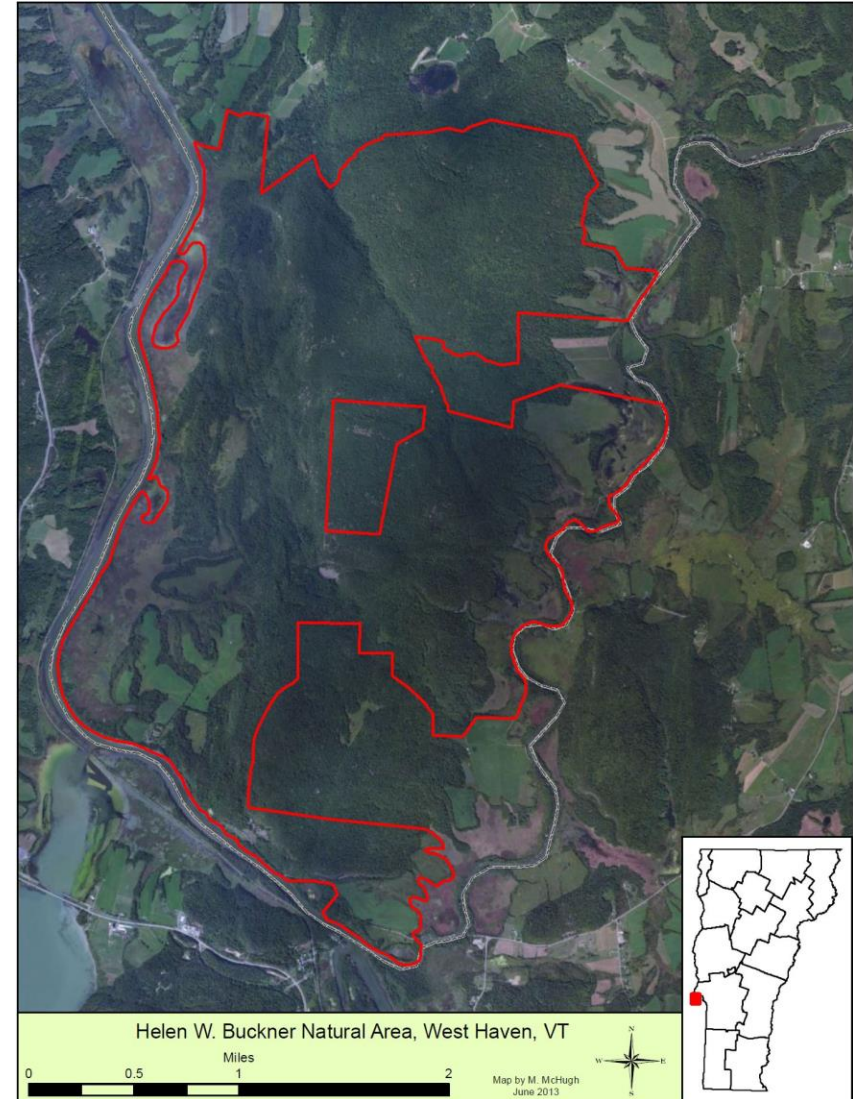


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Helen W. Buckner Memorial Preserve



Map Credit (L) © Murray McHugh/TNC (2013)
Photo Credit (Above) © Eliza Merrylees/TNC (2023)



Enhanced Habitat Monitoring & Management

Shrubland Bird Habitat Management

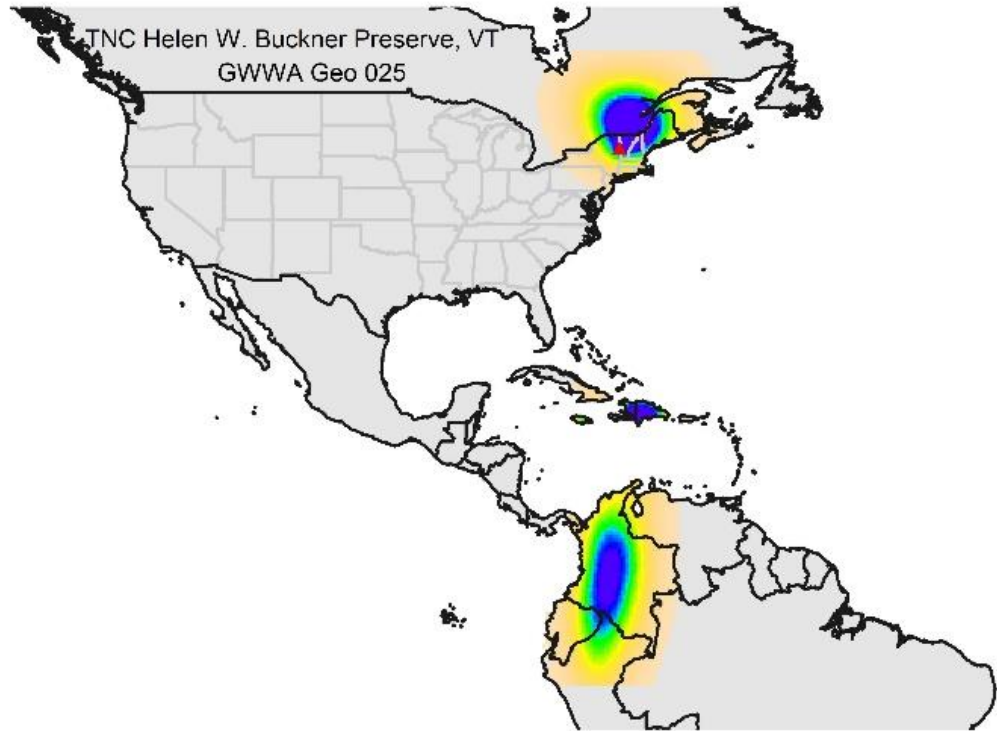


Invasive Plant Management



Photo Credits © Murray McHugh/TNC

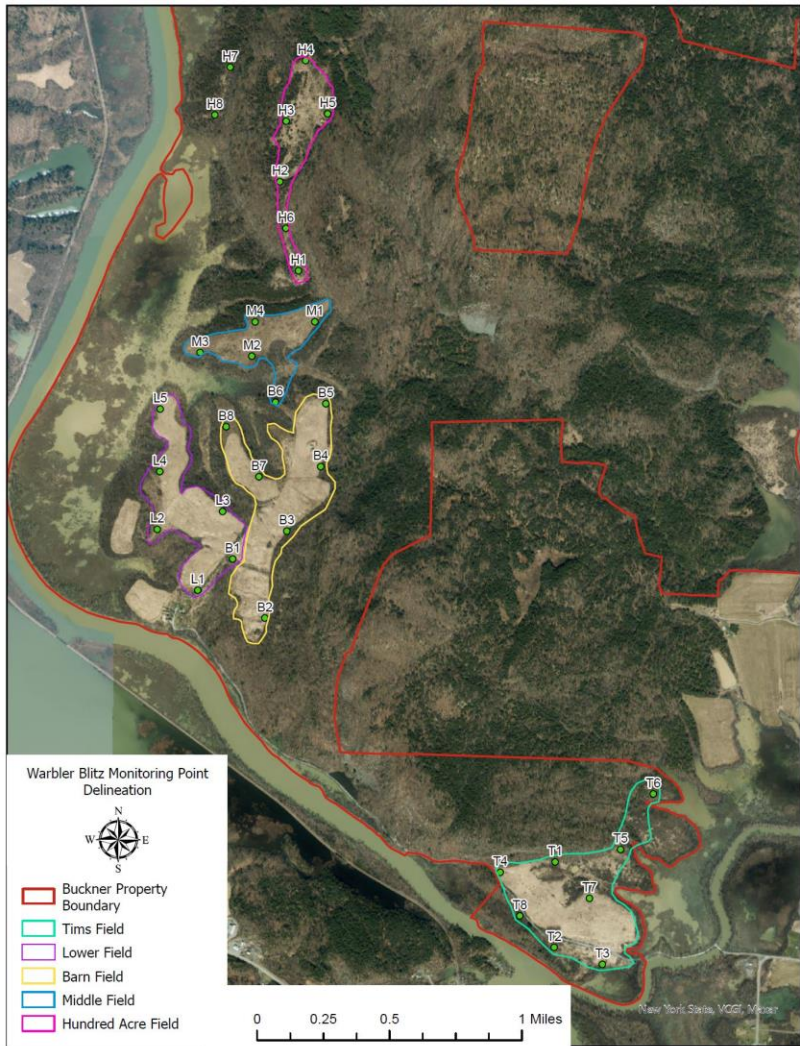
Geo-tagging



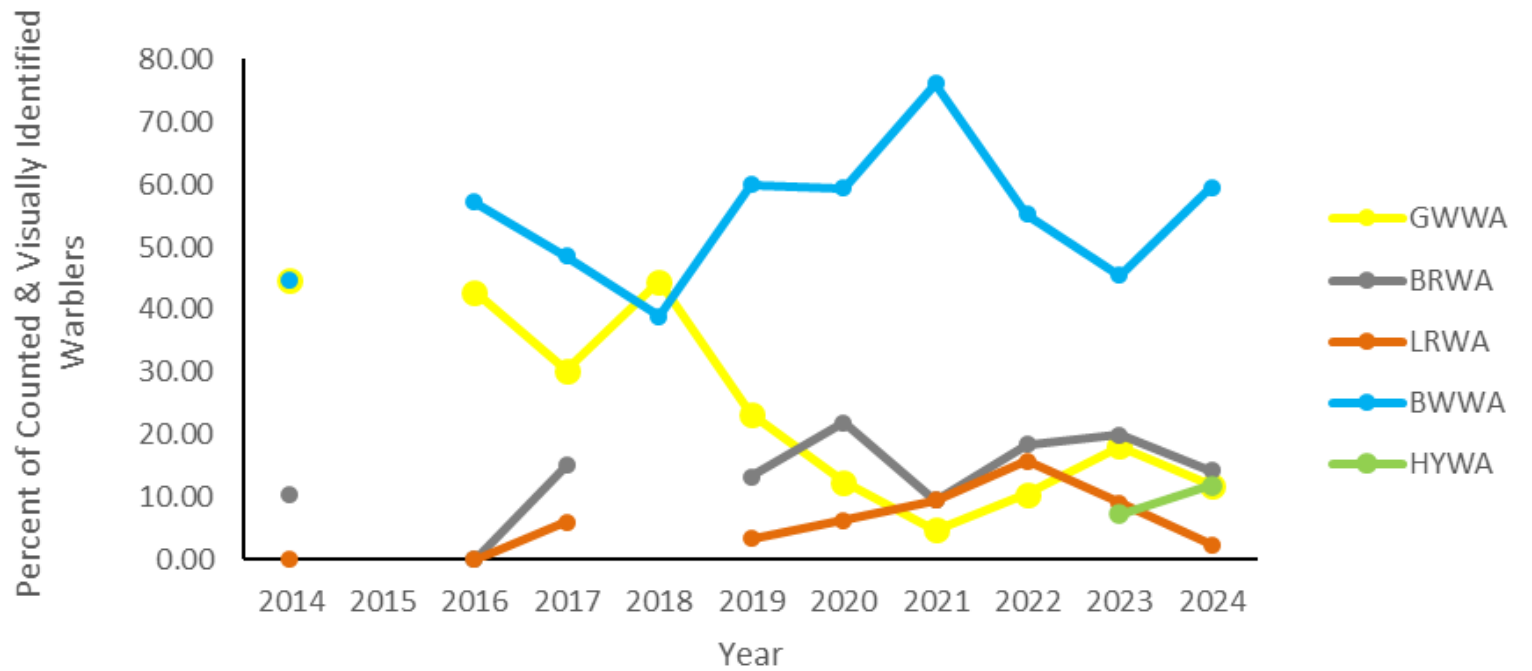
Concentrations of geolocator movement associated with Golden-winged Warbler 025 tagged at Buckner.



Annual Warbler Blitz

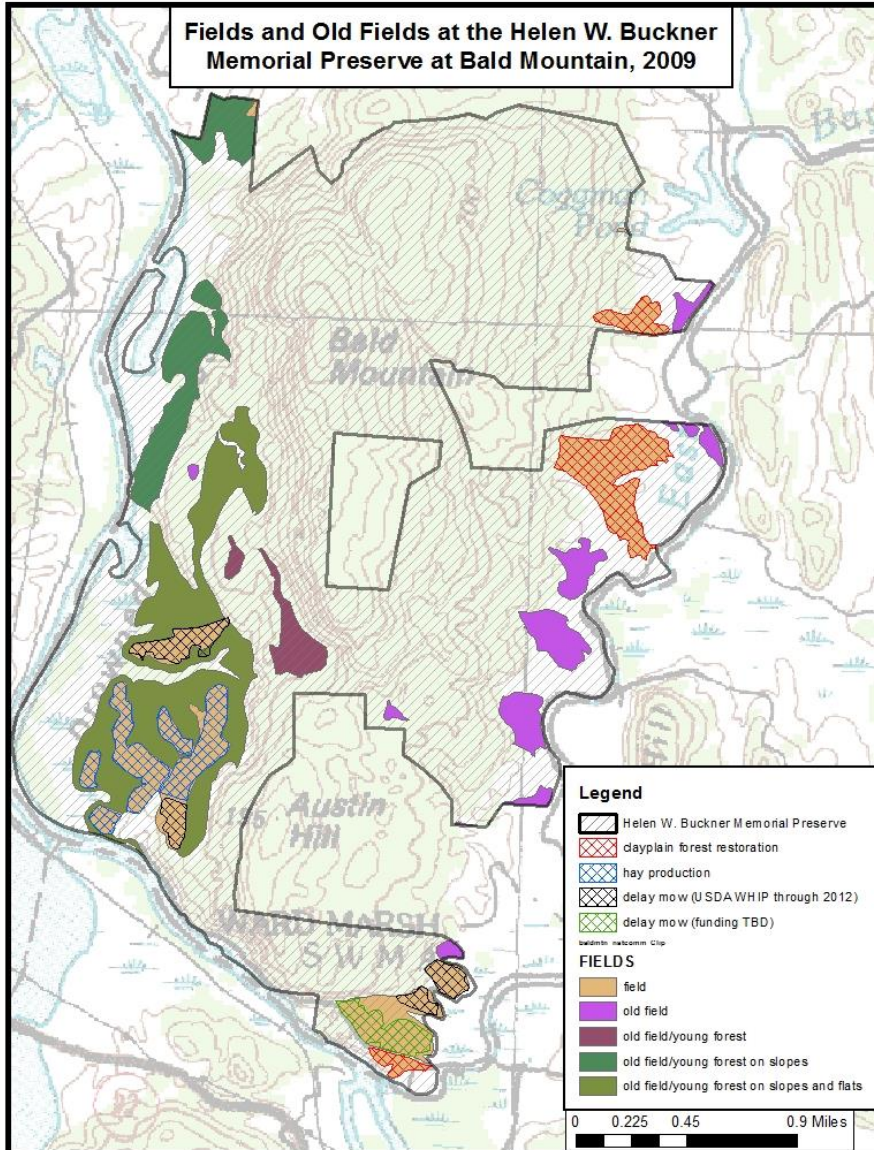


Percent of Surveyed Population by Warbler Type



Where We're At Now

Going Forward



- Begin systematic surveying of fields & restoration sites on the eastern side of Buckner.

- Jumpstart early forest/shrubland establishment in more recently farmed fields.
- Potential for using direct seeding methods including seed drilling.



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Golden-winged Warbler

Status Review and Conservation Plan



Art credits © Bartels Science Illustrator Caitlin Turner
Cover of "Golden-Winged Warbler Status Review & Conservation Plan" (Roth et al., 2019).

<https://gwwa.org/for-resource-professionals/>

Looking to keep up with reports from other winged-warbler groups:

- Golden-winged Warbler Working Group-- Breeding Grounds Committee
- Collaboration of conservation professionals spanning across the geography of the Appalachian Mountains
- Habitat Management Storymap:

<https://storymaps.arcgis.com/stories/16637ffe4a434f08b7132b3685b66fba>

Fruits of Our Partnership



Photo Credit © Murray McHugh/TNC (2019)

1. Maintaining, improving & creating habitat for a diversity of shrubland birds/species of greatest concern.
2. Able to trial, experiment & share methods for habitat management to support winged-warblers.
3. Engaging youth & other partners.

References

- Alexson, G. 2019. (September 19). *Vanishing: More Than 1 In 4 Birds Has Disappeared in the Last 50 Years*.
<https://www.allaboutbirds.org/news/vanishing-1-in-4-birds-gone/>
- Audubon Vermont. (n.d. (a)). *Shrubland Birds: How We Work*. <https://vt.audubon.org/conservation/working-lands/landing/working-lands-0>
- Audubon Vermont. (n.d. (b)). *Golden-Winged Warbler Geolocation Project*.
<https://vt.audubon.org/conservation/golden-winged-warbler-geolocation-project>
- Roth, A.M., R.W. Rohrbaugh, T. Will, S. Barker Swarthout, and D.A. Buehler, editors. (2019). *Golden-winged Warbler Status Review and Conservation Plan*. 2nd Edition. www.gwwa.org
- U.S. Department of Agriculture Economic Research Service. (2024, September 5). *Farm Characteristics*.
<https://data.ers.usda.gov/reports.aspx?StateFIPS=50&StateName=Vermont&ID=17854>
- Vermont Fish & Wildlife Natural Heritage Inventory. (2022, December 27). *Rare and Uncommon Animals of Vermont*.
<https://vtfishandwildlife.com>
- Vermont Forests, Parks and Recreation. (n.d.). *Overview of Vermont's Forests*.
<https://fpr.vermont.gov/forest/vermonts-forests>

Questions?