

Species of Greatest Conservation Need: How the Wildlife Action Plan Informs Conservation Actions

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Woods & Wildlife Conference

Virginia Tech

Blacksburg, VA

February 22, 2025



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Virginia Department of Wildlife Resources

Leading wildlife conservation and **inspiring** people to value the outdoors and their role in nature.

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Wildlife Division

- Research
- Habitat management and restoration
- Species Recovery
- Wildlife and Fish population monitoring and management



Fisheries Division

- Wildlife Cameras
- Wildlife Festivals
- Lands and Access
- Hatcheries
- Wildlife-Human Conflict



Nongame and Endangered Species Program



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Boating Division

- Hunting, Fishing, and Boating education
- Boat titling



Law Enforcement Division

- Law enforcement and investigation
- Publications
- Teacher Resources

An advertisement for the 'Explore the Wild' app. It features a hand holding a smartphone displaying the app's interface, which includes a search bar and various activity options like Hunting, Fishing, Boating, Paddling, Wildlife Viewing, Primitive Camping, and Hiking. A QR code is visible in the bottom right corner. The text reads: 'EXPLORE the Wild', 'Over 1,000 public land opportunities for you to explore to your heart's content.', and 'Explore the Wild is your online tool to find the best places in Virginia to hunt, fish, boat, paddle, view wildlife, hike, and go primitive camping! Scan this QR code with your smartphone or visit dwr.virginia.gov/explore today to discover new opportunities for adventure near you!'

Outreach Division

- Social Media
- DWR Store
- Restore the Wild
- Notes from the Field



Federal Wildlife Conservation Funding



Wildlife Restoration Act

- Enacted in 1937
- Purchase of firearms, ammunition & archery equipment (excise tax)
- Restore, conserve, manage and enhance wild birds and mammals and their habitats; hunter education
- Permanent appropriation; formula-based



Sportfish Restoration Act

- Enacted in 1950
- Purchase of fishing equipment, motorboat and small engine fuels (excise tax)
- Sportfishery projects, boating access, aquatic education
- Permanent appropriation; formula-based



State Wildlife Grants

- First established in 2000
- General treasury funding
- Tied to Species of Greatest Conservation Need identified in a state's Wildlife Action Plan and related conservation actions (research, surveys, restoration, habitat management, monitoring)
- Annual appropriation; formula-based





Importance of Partners and Stakeholders

- **This is Virginia's Plan, not DWR's Plan.**
- It needs broad buy-in and support to ensure successful implementation.
- DWR cannot effect the necessary actions by itself to conserve Virginia's wildlife and habitats.
- Partners and stakeholders provide input to species, habitats, threats and actions based on their visions and missions.
- Partners and stakeholders bring valuable resources – of all kinds – to conservation.

EIGHT ESSENTIAL ELEMENTS

1. Information on the distribution and abundance of species of wildlife, including low and declining populations as the *state fish and wildlife agency* deems appropriate, that are indicative of the diversity and health of the state's wildlife; and
2. Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1); and
3. Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats; and
4. Descriptions of conservation actions determined to be necessary to conserve the identified species and habitats and priorities for implementing such actions; and



EIGHT ESSENTIAL ELEMENTS

5. Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions; and
6. Descriptions of procedures to review the Plan-Strategy at intervals not to exceed ten years; and
7. Plans for coordinating, to the extent feasible, the development, implementation, review, and revision of the Plan-Strategy with federal, state, and local agencies and Indian tribes that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats; and
8. Congress has affirmed... that broad public participation is an essential element of developing and implementing these Plans-Strategies, the projects that are carried out while these Plans-Strategies are developed, and the Species in Greatest Need of Conservation (SGCN) that Congress has indicated such programs and projects are intended to emphasize.



NEW FOR 2025 REVISION

- Engagement and consultation with Virginia's federally-recognized tribes and inclusion of culturally-important species, traditional ecological knowledge, priority actions.
- More comprehensive inclusion of marine species (beyond sea turtles, marine mammals).
- Identification and inclusion of plants as SGCN.
- Return to a broader array of important conservation actions, including education, wildlife-related education, and enforcement.
- More directed inclusion of climate vulnerability and climate-smart actions.



Virginia Wildlife Action Plan

2025 Wildlife Action Plan

- 1920 Species of Greatest Conservation Need (SGCN)
 - 971 Plants
 - 576 Insects & Other Invertebrates
 - 89 Birds
 - 65 Reptiles & Amphibians
 - 111 Freshwater & Marine Fishes
 - 77 Mussels and Crustaceans
 - 31 Mammals
- 520 Assessment Priority Species
(They lack enough information to Tier rank)
- SGCN Tiers I – IV
- Conservation Opportunity Ranks a, b, and c
- Currently revising the Plan; due to USFWS Sept. 2025



Virginia Wildlife Action Plan



Tiers of Relative Conservation Need

Tier	Degree of Conservation Need	Description
1	Critical Conservation Need	Faces an extremely high risk of extinction or extirpation. Populations of these species are at critically low levels, facing immediate threat(s), or occur within an extremely limited range. Intense and immediate management action is needed.
2	Very High Conservation Need	Has a high risk of extinction or extirpation. Populations of these species are at very low levels, facing real threat(s), or occur within a very limited distribution. Immediate management is needed for stabilization and recovery.
3	High Conservation Need	Extinction or extirpation is possible. Populations of these species are in decline or have declined to low levels or are in a restricted range. Management action is needed to stabilize or increase populations.
4	Moderate Conservation Need	The species may be rare in parts of its range, particularly on the periphery. Populations of these species have demonstrated a significant declining trend or one is suspected which, if continued, is likely to qualify this species for a higher tier in the foreseeable future. Long-term planning is necessary to stabilize or increase populations.

- **A** — Managers have identified “on the ground” species or habitat management strategies expected to benefit the species; at least some of which can be implemented with existing resources and are expected to have a reasonable chance of improving the species’ conservation status.
- **B** — Managers have only identified research needs for the species or managers have only identified “on the ground” conservation actions that cannot be implemented due to lack of personnel, funding, or other circumstance.
- **C** — Managers have failed to identify “on the ground” actions or research needs that could benefit this species or its habitat or all identified conservation opportunities for a species have been exhausted.



NORTHEAST REGIONAL DATABASE AND LEXICON

- 13 States and the District of Columbia are developing standard criteria for the SWAPs
- All 14 SWAPs will be included in a Northeast SWAP Database for regional conservation work
- Standardized SGCN criteria, habitat definitions, threats and actions



5.2. Gathering Terrestrial Plants or Fungi – Harvesting and gathering wild plants, mushrooms or other non-animal/non-timber species for commercial, recreational, subsistence, cultural, research or control purposes, but excludes research (Threat 6.3)

5.2.1. Recreational or Subsistence Harvesting – harvesting of plant or fungi species that has a lethal effect on the individual and is governed by managed measures. Illegal harvesting should be classified as “Poaching/eradication of terrestrial plants or fungi” (Threat 5.2.4) E.g., recreational or subsistence harvesting of wild leeks.

5.2.2. Commercial Harvesting – commercial harvesting of plants or fungi species that has a lethal effect on the individual and is governed by management measures. Excludes peat harvesting (Threat 3.2.4) and products from plantations (Threat 2.2). E.g., commercial harvesting of fiddleheads. |

5.2.3. Non-Lethal Harvesting of Terrestrial Plant Products – sub-lethal harvesting of plants or fungi related products, which is governed by management measures. E.g., collecting of cedar bark, tree tapping for sugar maple production.

5.2.4. Poaching/Eradication of Terrestrial Plants or Fungi – deliberate and illegal harvesting of plants or fungi for personal or commercial purposes or eradication due to prejudices against the species. E.g., illegal gathering of American ginseng, eradication of cow parsnip because of its similar appearance of giant hogweed, an invasive alien species.



Important Conservation Actions

- Timber Harvest/Prescribed Burning
- Riparian Buffers
- Reduce Habitat Loss
- Wetland restoration
- Restore/Maintain Grasslands/Shrublands
- Control Invasive Species
- Maintain Some Old Growth Forest/
Large Forest Blocks
- Limit the Use of Pesticides
- Climate Change
- Protect Sensitive Habitats (e.g. caves, roost areas)



Using Silvicultural Practices to Benefit Imperiled Species

Cerulean Warblers (*Setophaga cerulea*)



Cerulean Warbler outfitted with light-level geolocator unit. Photo by [unclear]



Cerulean Warbler photo by Andy Reago and Chrissy McClarren.

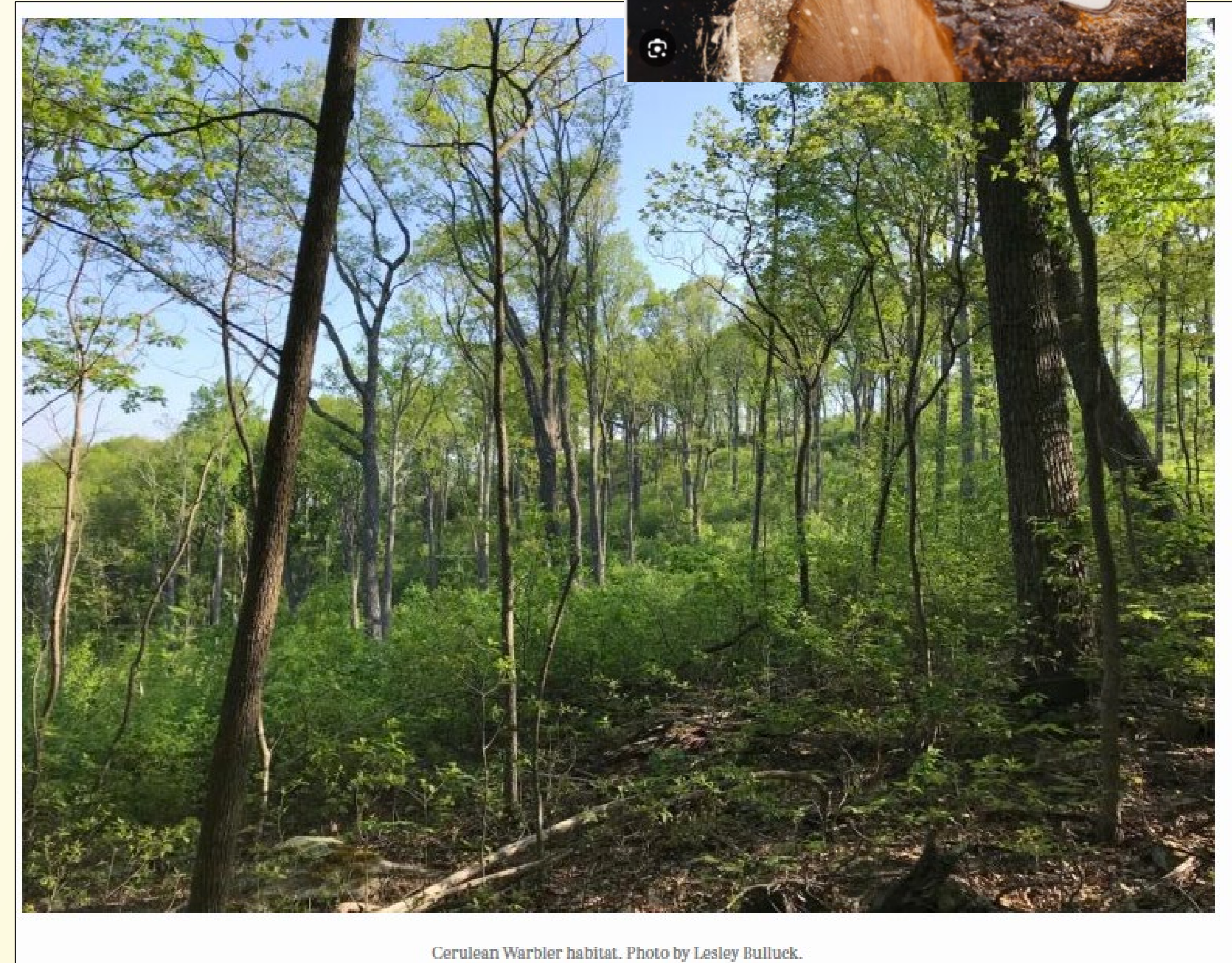
- Small warbler; males have blue plumage
- Mature, tall-canopy forest with dead fall and canopy gaps
- Breeds in the Mountains of Virginia
- Spends winters in the Andes of South America
- Declined 72% from 1970 - 2014
- SGCN Tier IIa



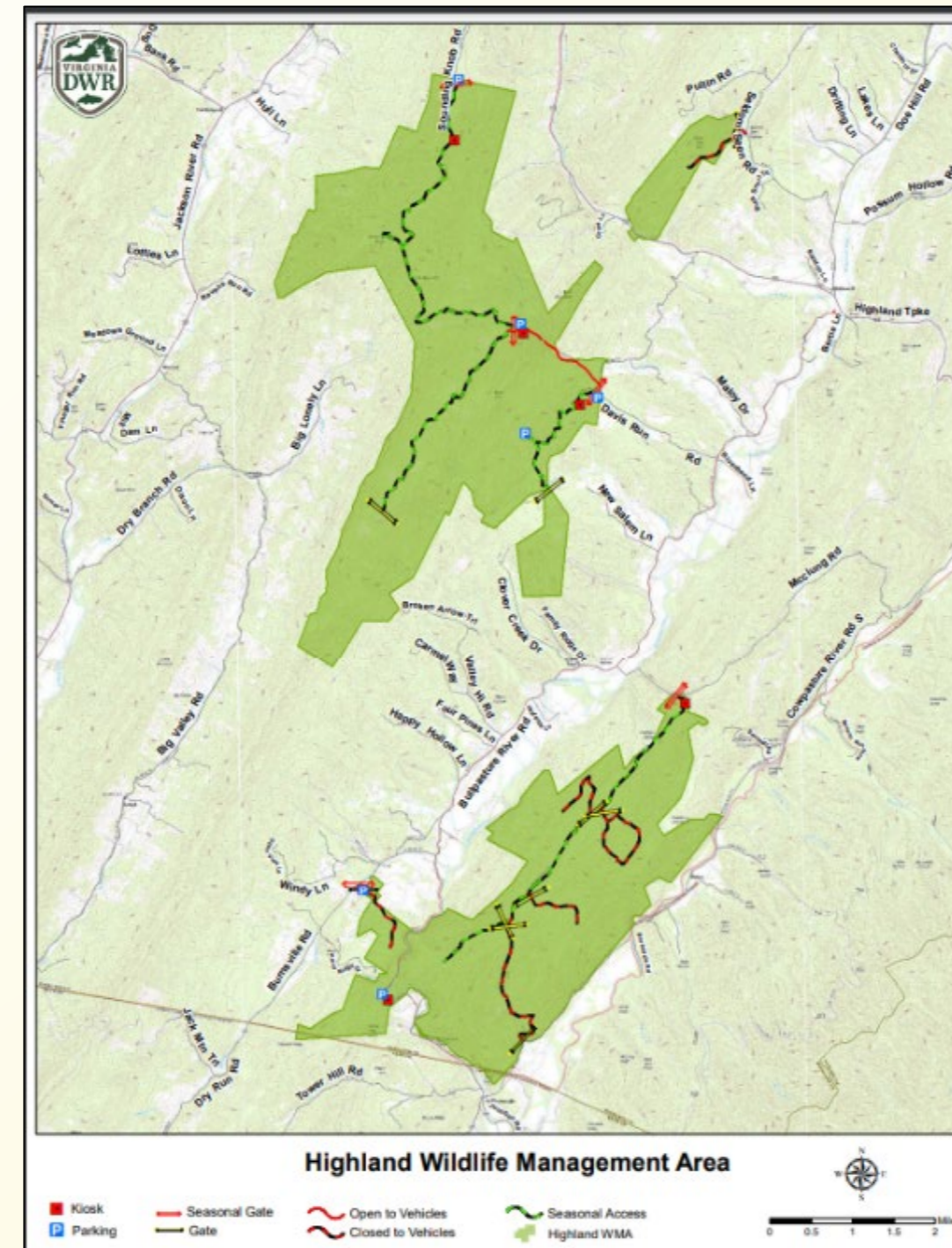
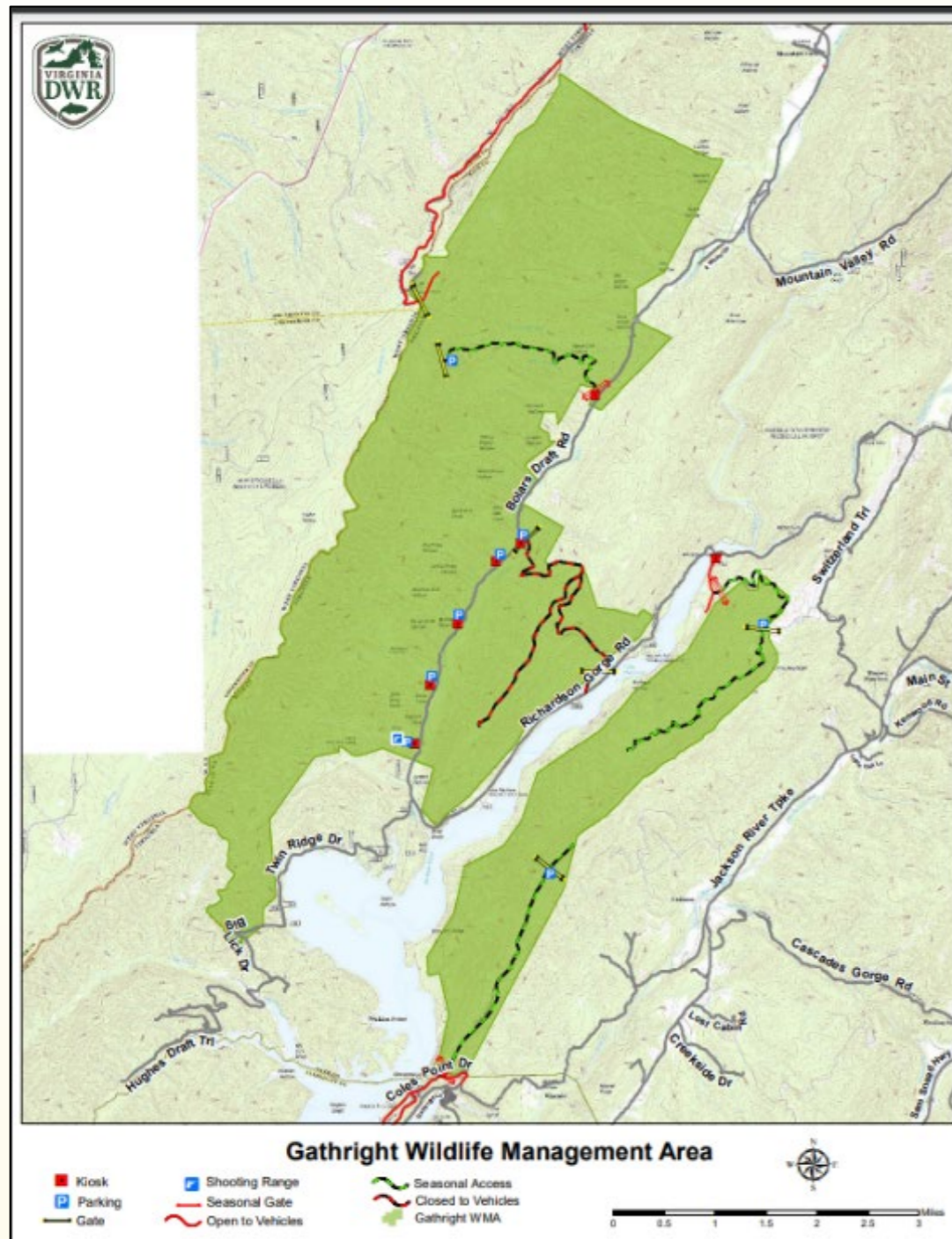
Using Silvicultural Practices to Benefit Imperiled Species

Cerulean Warblers (*Setophaga cerulea*)

- Gathright Wildlife Management Area
- Highland Wildlife Management Area

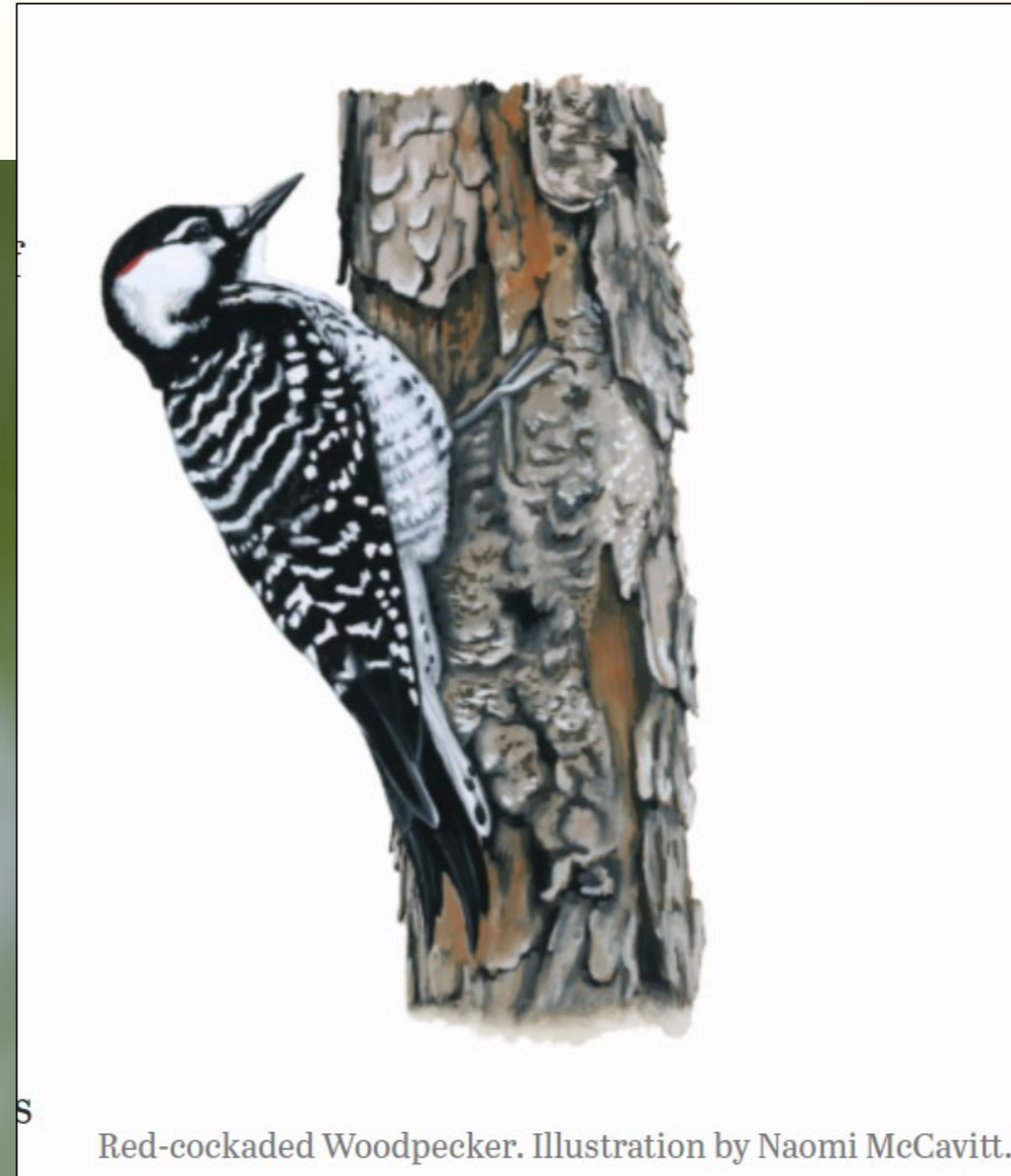


Cerulean Warbler habitat. Photo by Lesley Bulluck.



Using Silvicultural Practices to Benefit Imperiled Species

Red-cockaded Woodpeckers (*Dryobates borealis*)



- About the size of a robin (7-9")
- Federally endangered; state endangered
- Species of Greatest Conservation Need Tier Ia
- Depend on mature, open pine savannas
- Excavate nesting cavities in living pine trees
- Cooperative breeder, live in family groups, delayed breeding
- Long recovery times for the population
- Only known at three locations in VA, all highly managed and the result of reintroduction many years ago



Using Silvicultural Practices to Benefit Imperiled Species

Red-cockaded Woodpeckers
(*Dryobates borealis*)

- Big Woods Wildlife Management Area
- Piney Grove (TNC)
- Great Dismal Swamp National Wildlife Refuge (FWS)



Prescribed burn at Big Woods WMA. Photo by Matt Kline/DWR



Prescribed fire is an effective tool for creating the habitat needed for red-cockaded woodpeckers. Photo by Matt Kline/DWR



Open loblolly pine savanna at Big Woods WMA



Using Silvicultural Practices to Benefit Imperiled Species

Allegheny Woodrats (*Neotoma magister*)



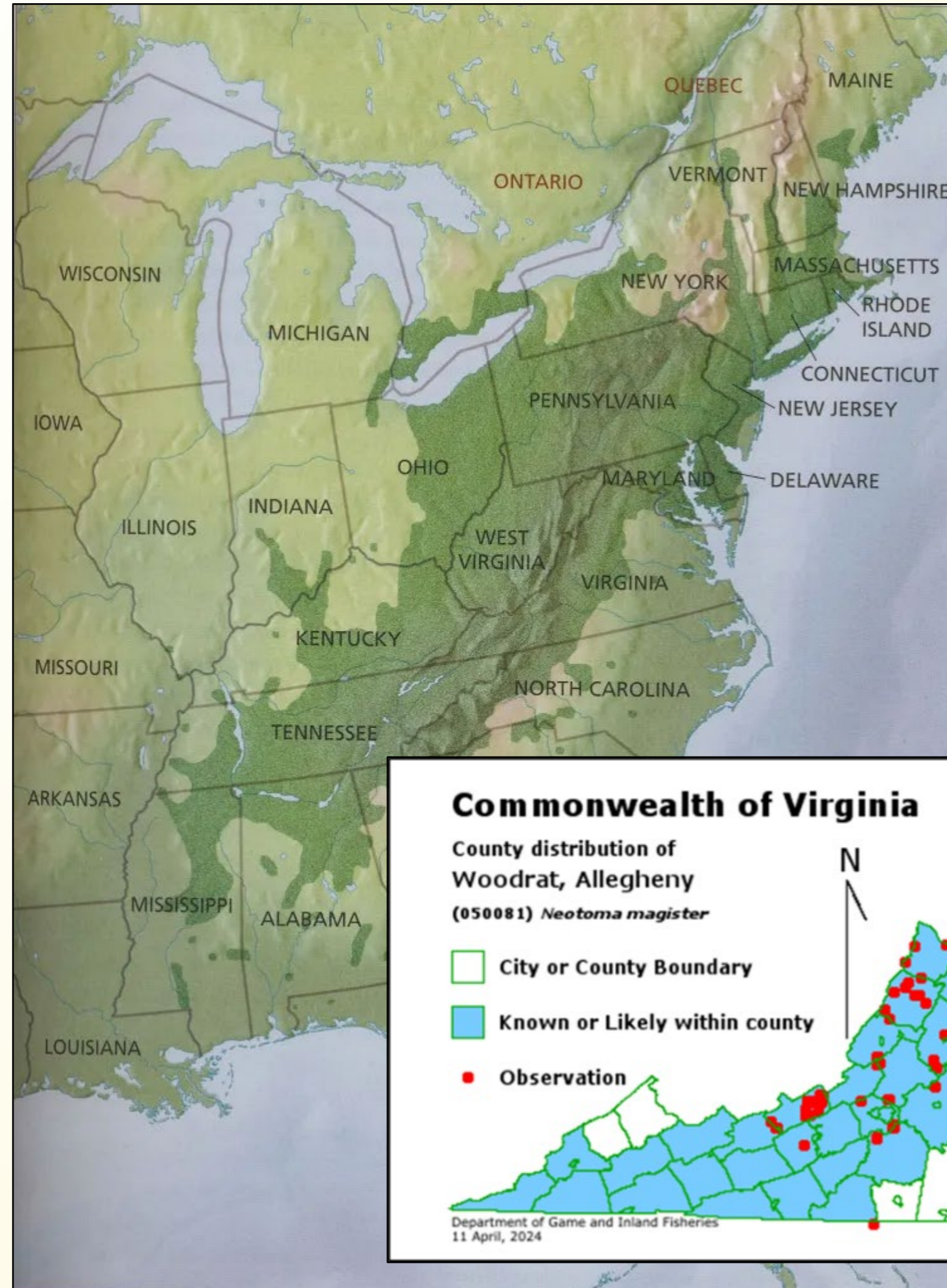
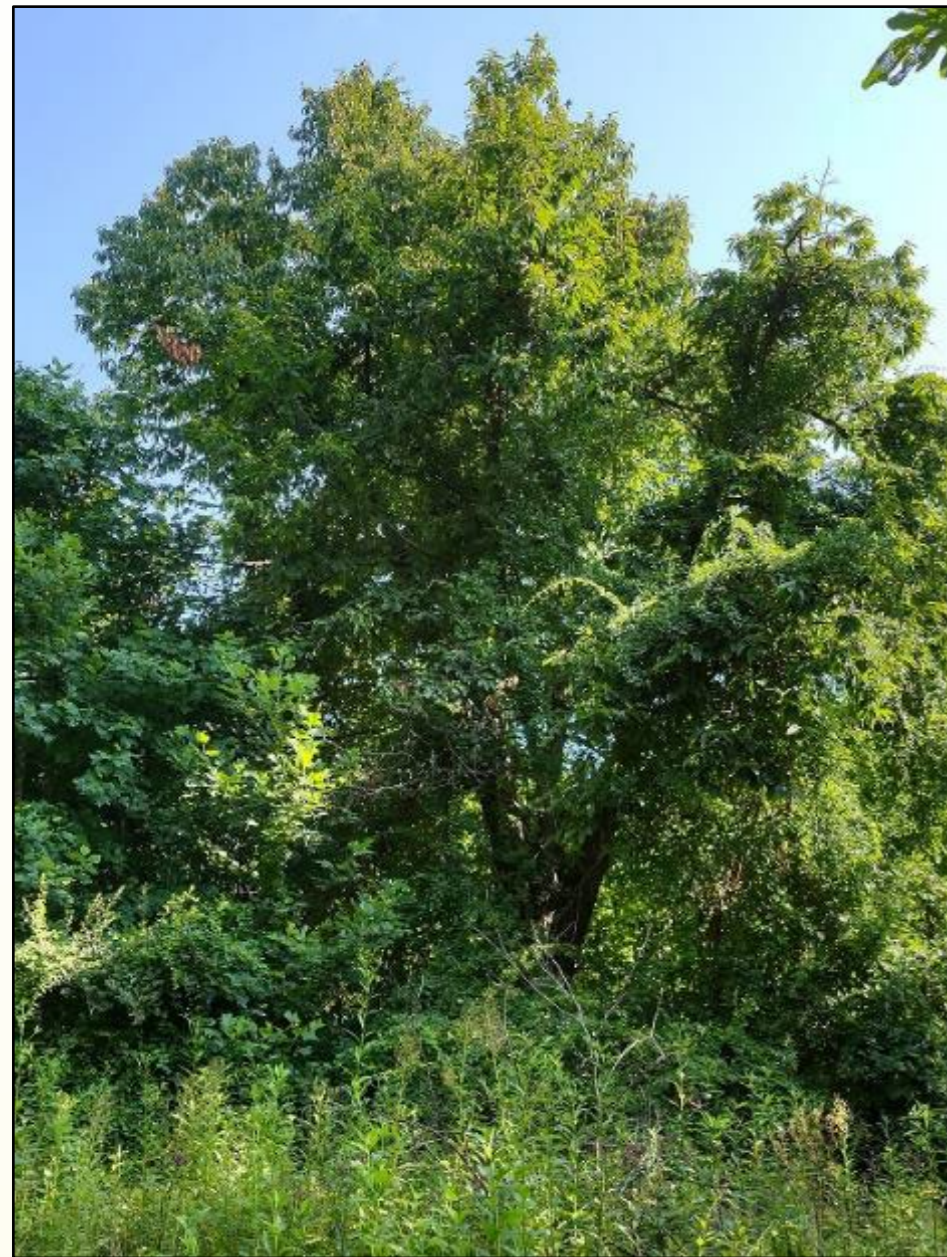
- 13-17” animal (medium sized rodent)
- Packrat
- They build a “house” with multiple nests contained within; used by other species
- They inhabit steep, rocky cliffs of talus
- Herbivorous – eats mainly fungi, seeds, and fruit
- Historically, American chestnuts were the main food source
- Tier IVa SGCN



Using Silvicultural Practices to Benefit Imperiled Species

Allegheny Woodrats (*Neotoma magister*)

- Chestnut has been replaced by oak acorns
- Silvicultural practices that enhance the acreage of oak/hickory forests on the landscape benefits this species.
- Thinning
- Rx Fire
- Control Competition



Northern Long-eared Bats

(Myotis septentrionalis)

- Known to inhabit 37 states and 8 provinces in North America
- Service announced in November 2022 that it is reclassifying the NLEB as endangered, under the federal ESA, as of March 31, 2023.
- Overwintering habitat for NLEB's in Virginia
 - historically consisted of caves and mines in western Virginia
 - recent data indicate that there is a subset of Virginia bats, including NLEBs, that live year-round in the southeastern forests
- Suitable summer habitat for NLEBs in Virginia
 - forests with trees of 3" DBH or greater
- Popns have declined 97-100% across about 80% of their range
- Without intervention NLEB will likely be extinct by 2030



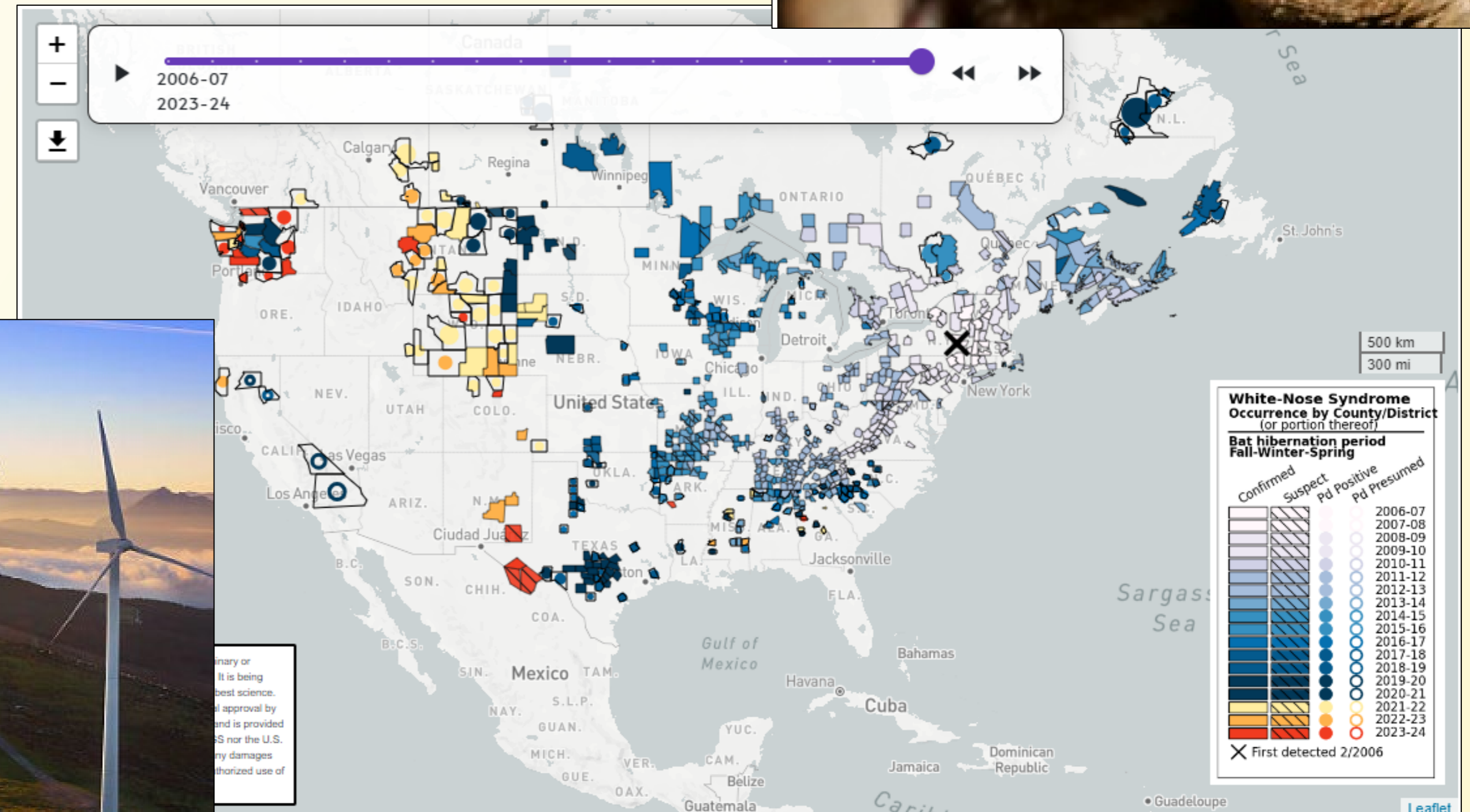
Why are our native bat populations declining?

- Disease – White-nose syndrome (WNS), caused by a fungus (*Pseudogymnoascus destructans*), Pd. Damage to the skin raises body temperature, bringing the animals out of hibernation and wasting the energy they need to sustain themselves.



- Low reproductivity, no chance to recover

- Climate Change
- Habitat loss/fragmentation
- Wind energy



BATS !!! A Whole “Nother” Thing.....



imgflip.com

Due to the widespread distribution of bat species in Virginia
And their plummeting populations...

There is an entirely new process for evaluating impacts from
timbering and other on the land impacts.

Please coordinate with the DWR Environmental Services
Section if you have questions about possible impacts to bats.

Private Projects with no Federal Money or interface
<https://dwr.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/>

DWR Best Management Practices

<https://dwr.virginia.gov/wp-content/uploads/media/LBBA-TCBA-Guidance.pdf>



Environmental Services

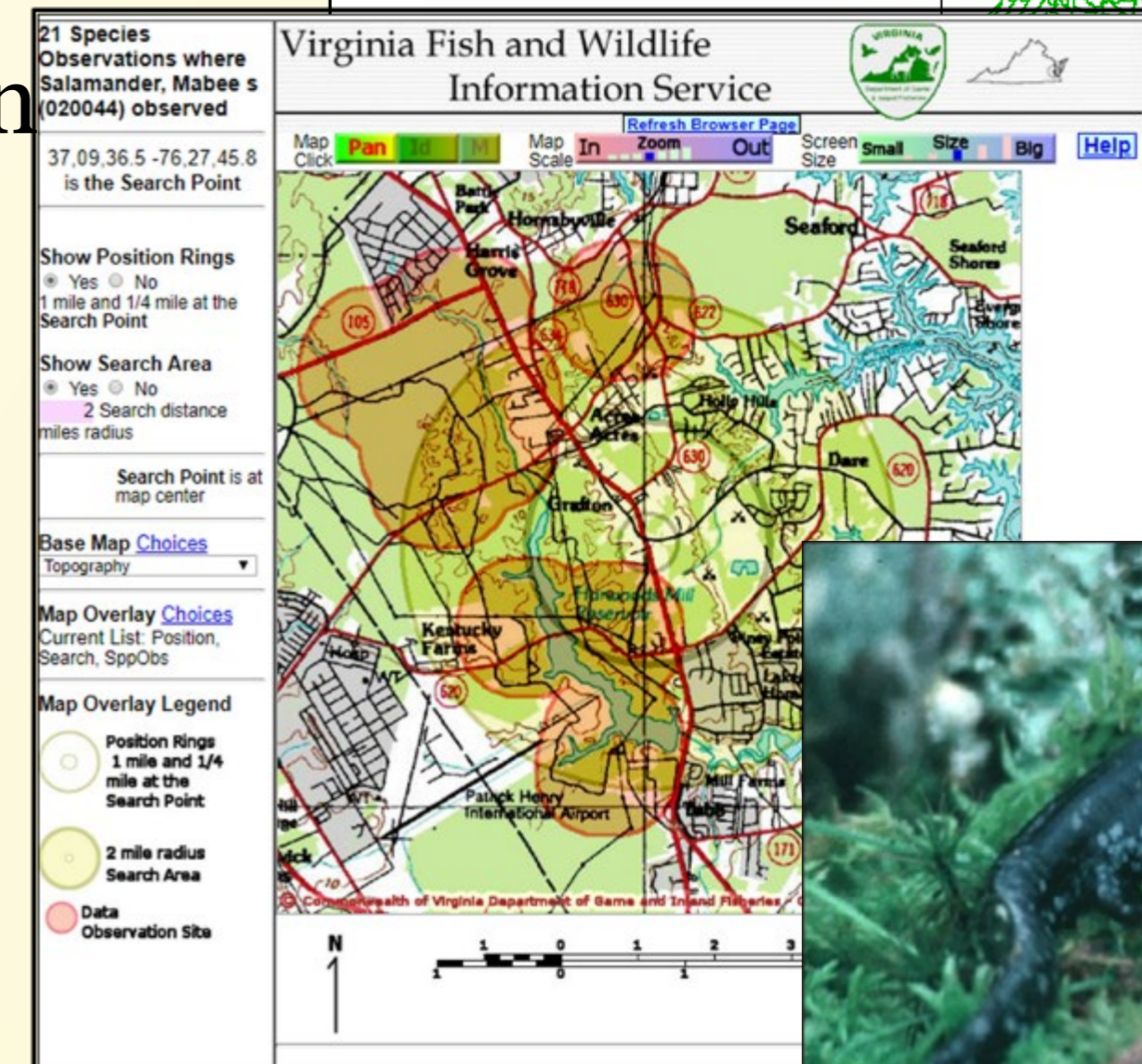
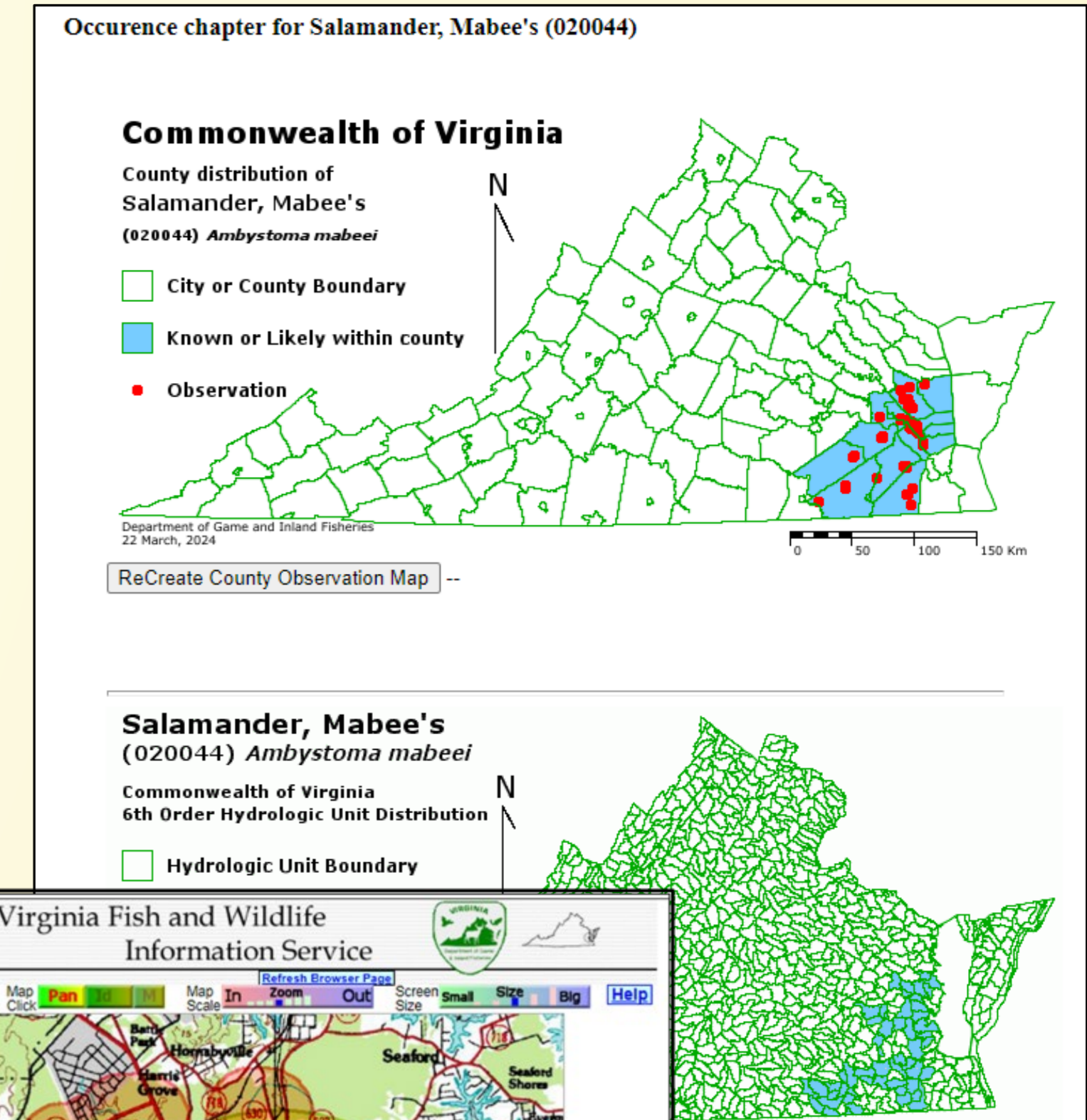
Aquatic Wildlife Resources Division

- Review projects, permit applications, proposed laws and regulations, NEPA documents, EIRs, SCC Applications, PBRs
- Ensure consideration of impacts upon wildlife and their habitats during project development
- Threatened and Endangered species protection
- Recommend ways to avoid and minimize impacts upon wildlife
- Recommend mitigation for unavoidable impacts
- Represent DWR on inter-agency teams

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Success Stories

Golden-winged Warbler

What DWR has done:

- Outreach to Landowners
 - Educate landowners about maintaining shrublands
 - Surveys to determine landowner attitudes
- Habitat Restoration on Agency Lands
- Tracking/Monitoring on Wintering Grounds in South America (Southern Wings Initiative)

dwr.virginia.gov/blog/prospecting-for-gold-the-golden-winged-warbler-on-highland-wma/



Golden-winged warbler habitat at Highland WMA



Success Stories

Northern Bobwhite (Quail)

Still a work in progress....but we're making progress!!

- Since 2010 over 55,000 acres managed for quail by private lands biologists
- Additional habitat managed primarily for red-cockaded woodpeckers at Big Woods WMA benefits quail
- Lands managed for quail benefit many SGCN species
- Assisting Pennsylvania in restoring quail populations



Quail require edge habitat and cover

How to get involved

<https://dwr.virginia.gov/quail/get-involved/>



Thank you!

Any questions?

