

**Virginia Cave Board
Thursday, January 23, 2025
Natural Bridge State Park
Natural Bridge, Virginia**

TIME AND PLACE

The meeting of the Virginia Cave Board took place at 11:00 a.m. on Thursday, January 23, 2025, at Natural Bridge State Park.

VIRGINIA CAVE BOARD MEMBERS PRESENT

Andrea Futrell, Chair
Steve Ahn
Jacqueline Gooden-Seay

John H. H. Graves
David Hubbard
Austin Shank

VIRGINIA CAVE BOARD MEMBERS NOT PRESENT

Russell Kohrs
Stephanie Lillard
Allen L. Louderback

Roger W. Kirchen (ex officio)
Jason H. Carter, Vice Chair

DEPARTMENT OF CONSERVATION AND RECREATION (DCR) STAFF PRESENT

Frank Stovall, Deputy Director for Operations
Paul G. Saunders, III, Senior Policy Analyst
Jason Bulluck, Director, Natural Heritage Program
Wil Orndorff, Kart Protection Coordinator
Katarina Kosic Ficco, Field Cave and Karst Scientist
Whitten Cluff, Executive Assistant for Operations
Penelope Vorster, Karst Technician
Zenah Orndorff, Karst Technician
Emi Endo, Senior Public Relations and Marketing Specialist

OTHERS PRESENT

Mary Sue Socky
David Socky

ESTABLISHMENT OF A QUORUM

With six members of the Board present, a quorum was established.

CALL TO ORDER

Chair Andrea Futrell, called the meeting to order at 11:10 a.m.

INTRODUCTIONS

Chair Futrell called for introductions.

Members of the Board and DCR staff present introduced themselves.

APPROVAL OF MINUTES FROM SEPTEMBER 9, 2024

BOARD ACTION

Mr. Graves moved that the minutes from the September 9, 2024, meeting of the Virginia Cave Board be approved as presented. Mr. Ahn seconded, and the motion carried.

TREASURER’S REPORT

Mr. Bulluck presented the following financial information:

**DCR - Natural Heritage (Cave Board License Plates)
 Summary of Financial Activities
 Fiscal Year 2025 (through December 31, 2024)**

FY25 Beginning Cash Balance	1,480
Revenues	Amount
FY25 Revenues	-
Total Revenues	-
Expenses	Amount
FY25 Expenses	-
Total Expenses	-
Total Cash Balance (as of December 31, 2024)	1,480

**DCR - Natural Heritage (Cave Board)
 Summary of Financial Activities
 Fiscal Year 2025 (through December 31, 2024)**

FY25 Beginning Cash Balance	1,141
Revenues	Amount
FY25 Revenues	-

Total Revenues	_____
Expenses	Amount
FY25 Expenses	_____
Total Expenses	_____
Total Cash Balance (as of December 31, 2024)	<u>1,141</u>

DCR PRESENTATION AND AGENCY UPDATE ON CAVES AND KARST

Mr. Orndorff presented the following:

VDCR Natural Heritage Karst Program
 Update to Virginia Cave Board
 1/23/2025
 Wil Orndorff, Karst Protection Coordinator

Appalachian Karst Symposium

Karst Protection Coordinator Wil Orndorff, in his capacity as a Board member of the Karst Waters Institute, co-chaired and organized the 4th Appalachian Karst Symposium, held November 7-10 in Lewisburg, West Virginia. The first Appalachian Karst Symposium was held in 1991 in Radford, Virginia, the second in Gray, Tennessee in 2008, and the third in conjunction with the Sinkhole Conference in 2017 in Shepherdstown, WV. The 2024 conference was the largest to date, with just over 100 attendees. There were thirty oral presentations, twelve posters presentations, and an all-day field trip. Karst staff presented on our cave beetle inventory work (Malabad), conservation site methodology (Vorster), dye tracing in response to a contamination incident on the Mountain Valley Pipeline (Kosic – Ficco), and karst geomorphology in the southern Valley and Ridge (W. Orndorff). Z. Orndorff gave a lighting talk on carbon dioxide in caves, the most common atmospheric hazard encountered in caves in North America, both under-recognized and misunderstood. Attendees also participated in an all-day field trip learning about the karst of the Greenbrier Valley, and many attended optional Sunday field excursions. The program is available for perusal at karstwaters.org. Many thanks to John Graves and Luray Caverns, the Cave Conservancy of the Virginias, the Cave Conservancy Foundation, Terracon, and TRC for sponsoring the event, which was co-hosted by the West Virginia Cave Conservancy. Included among the presentations was one on cave beetles in Virginia by Dr. Karen Ober of the College of the Holy Cross, highlighting her upcoming paper in which ~ ten cave beetle species (all new to science and all from Virginia) will be officially described.

Biological inventory of Virginia Caves

Staff continue to focus on systematic biological inventory of Virginia’s significant caves, focusing on cave with no recent collections, and those significant caves without prior or with insufficient prior studies. Significant recent results include collection of the first cave beetle on record from a cave in Augusta County’s Cave Hill, hope to Grand, Fountain, and Madison Saltpetre Caves. The beetle was collected from Fountain Cave. In addition, staff identified a previously unknown concentration of bats in Will Mauck Cave in Page County, just north of Luray Caverns. Approximately 30 tricolored bats (*Perimyotis subflavus*), a cluster of 33 little

brown bats (*Myotis lucifugus*), two *Myotis* sp. (too far away to determine), and the typical handful of big brown bats (*Eptesicus fuscus*) were documented in the cave. The cluster of little brown bats was particularly noteworthy given the species decline in the past 15 years due to White Nose Syndrome (WNS). This continues a trend since WNS of finding previously undocumented concentrations of little brown bats in caves proximal to the James and South Fork Shenandoah rivers. Woods Cave in Page County, currently the site of largest known hibernating group of little brown bats (~ 1000 in 2023), will be counted in February. Please note this is less than 10% the size of the largest known hibernacula in Virginia prior to WNS. However, the colony in Woods Cave has been steadily increasing over the last decade.

Mountain Valley Pipeline

The Mountain Valley Pipeline is in service and the ROW is in final restoration, and the memorandum of understanding between VDCR and the pipeline developer ends in May, 2025. Under this agreement, VDCR provided technical services pursuant to protection of karst and caves under the Section 401 Clean Water Act certification of the project issued by the State Water Control Board in 2018. DCR's involvement was at the request of the State Water Control Board and DEQ because of the lack of expertise in their agency to effectively address cave and karst issues. No known significant caves were adversely impacted by the project, and one new significant cave was discovered. There were transient impacts to several springs, and one spring is reported by the owner to have ongoing sedimentation issues, as of last communication in 2023.

VDEQ and Stormwater Management Handbook

The 2024 Virginia Stormwater Management Handbook was released on July 1, 2024, and is available on DEQ's website via a link to contractor "encodeplus", which hosts and manages the handbook. The handbook is designed to be updated regularly, there is a Technical Review Committee that addresses comments and RECOMMENDS edits/changes to the handbook to VDEQ in response to stakeholder and user feedback. Karst Protection Coordinator Wil Orndorff serves on this committee.

Nongeneral funded projects

DCR karst staff consists of two full-time, general funded employees, one full-time nongeneral funded employee, and approximately half-time, nongeneral funded wage staff. Projects currently supporting nongeneral funded staff include:

- An ongoing Department of Wildlife Resources (DWR) contract to assist with cave-related work on bats and other small mammals, which support the single DWR staff member with cave-related skills and experience.
- A DWR contract (one-time) to further evaluate the potential habitat area and range of the Ellett Millipede (*Pseudotremia cavernarum*), petitioned by the Center for Biodiversity in 2023 for federal listing (finding is delayed). This species is currently state-listed as endangered, and has long been considered by DCR staff to be the single most at risk of extinction cave obligate species in Virginia. High quality habitat within its very limited range is a target of ongoing land protection efforts by VDCR and partners.
- United States Forest Service site assessments performed through an agreement with the USFS to provide state expertise to data acquisition to inform management decisions on Service tracks slated for a variety of projects (timbering, stand improvement, wildlife management, prescribed fire, et cetera).

Giant Caverns

DCR staff worked with the New River Land Trust, Town of Narrows, Virginia Outdoors Foundation, Dr. Lewis Webb, and West Virginia Cave Conservancy to protect and manage Giant Caverns as part of a deal expanding the Town's Mill Creek trail system. Giant Caverns, a former commercial cave that is on the significant cave list and is a type locality for a cave beetle species, was on the tract being purchased by the Town from Dr. Webb. We worked collaboratively to cut out approximately 4 acres overlying the cave and containing both cave entrances in order to relieve the Town of the burden of managing the cave while providing the protection and appropriate recreational and scientific access via ownership by the West Virginia Cave Conservancy. This deal will close in early February and is a great example of public-private partnership.

Caverns at Natural Bridge

Natural Bridge State Park acquired the Caverns at Natural Bridge in October of 2024 for the primary purpose of protecting the significant natural heritage resources associated with this significant cave, which include bats and several globally rare cave-limited invertebrate species. The Division of State Parks is collaborating with stakeholders, including the karst team in the Division of Natural Heritage (my staff), to develop a management strategy and associated plan for management of the caverns moving forward. Input from the Cave Board would be valuable in development of the management strategy and plan.

Spring Inventory of the Upper Tennessee River Basin in Virginia

Karst program staff is looking for funding support for a project to perform inventory and basic characterization of springs in the Upper Tennessee River Basin in Virginia, a global biodiversity hotspot for aquatic, terrestrial, cave, and spring obligate species. Currently, no such inventory exists, making it difficult to identify important ecological refugia, or predict karst groundwater flow paths in the event of contamination incidents. Potential funding partners include the US Fish and Wildlife Service, the Tennessee Valley Authority, and the Virginia Department of Wildlife Resources. Any such inventory would include submission of all data to the VDEQ Virginia spring database project, which to date has been mostly limited to the Shenandoah Valley and surrounding areas, and for which there is no direct state funding.

LAND CONSERVATION UPDATE

Mr. Bulluck provided the Board with some background information on the Natural Heritage Program and presented the following update:

In early November, DCR completed one of the smallest Preserve acquisitions in program history, by adding 0.055 acres to **The Cedars NAP (Lee County)**. This tiny inholding had frustrated stewardship and protection staff as well as the private landowner for many years and previous attempts to acquire it had failed. However, earlier in 2024, another opportunity presented itself when it was discovered the same landowner held a parcel in need of boundary line adjustment (BLA) with the recently acquired "Vehrs" tract. As part of the BLA negotiation the landowner finally agreed to donate the tiny inholding to DCR, rounding out the Preserve's boundary along the adjacent Flanary Bridge Road. Due diligence expenses were paid through private donations to the Tax Checkoff fund and Natural Area Preservation Fund.

More recently, DCR recently added the "**Kaylor tract**" to the Deep Run Ponds Natural Area Preserve (**Rockingham County**). This parcel, totaling 100 acres, expands conservation of "Shenandoah Valley sinkhole ponds" within the NAP system. These globally rare wetlands often feature numerous

additional natural heritage resources, in this case populations of four significantly rare plant species. By some measures, this tract could have appeared to have been already “protected” through an existing conservation easement. However, the terms of that easement allowed forestry practices and buildings that, due to their proximity to the sinkhole ponds, were incompatible with VDNH’s long term conservation and protection goals. Through DCR’s fee-simple purchase VDNH gains the ability to abate these threats. Purchase was supported by a grant from the Virginia Land Conservation Foundation (VLCF).

In the last report, we noted VDNH efforts to expand protection at **Unthanks Cave NAP (Lee County)**. **Protection staff** worked with at least 3 different attorneys, a court appointed Special Commissioner, 3 different family members and several prospective private conservation buyers. In the end, the two contiguous parcels of interest were sold at auction. First, the parcels were auctioned individually and a potentially interested conservation partner “won” the most significant parcel. However, the auctioneer immediately proceeded to bundle and resell both together at which time they were purchased by another buyer and presumably lost from a conservation perspective.

VDNH located some additional funds needed to consummate the planned land purchases near **Brocks Gap (Rockingham Co)** from the DuPont settlement, as match to existing VLCF funds. Various other project steps have been hampered by contractor issues and other delays, but these are slowly being resolved and it is expected that closing will eventually result in establishment of this new NAP bordering the North Fork Shenandoah River and the **geologically significant North Mountain fault**.

DCR continues to work toward several fee-simple acquisitions along the Ellet Escarpment (Montgomery Co). VDNH obtained several additional grants from VLCF recently to support this project. The first grant provides the supplemental funding required to consummate the initial purchases of 2 parcel (~ 33 acres & the entrance to “**Dave’s Cave**”). With these funds in hand, these parcels are expected to close relatively soon, forming the nucleus of a new NAP designed, primarily, to protect the **Ellett Valley Millipede (*Pseudotremia cavernarum*)**. Significant progress has been made on several other nearby parcels with two known cave entrances and footprints (**Mice’s Hole** and **Salamander Cave**). VDNH was awarded two additional grants to support these purchases, but given land values these significant funds remain insufficient. In addition, one of the owners engaged a realtor just days before the grant was awarded. For both reasons, VDNH has agreed to partner with The Conservation Fund (TCF). TCF has access to an internal loan program to “front” potential purchases, and staff capacity to conduct detailed negotiations if fully compensated. VDNH has agreed to TCF’s terms of compensation, even though existing grants will not reimburse these. With that general agreement in hand, TCF, has obtained a signed LOI for the first of the “for-sale” parcels and is working on the others. VDNH is actively working on a grant application, due Jan 22, seeking grant funds from the MVP Core Fund that could fund remaining land costs, some of TCF’s fees, as well certain VDNH stewardship activities.

VIRGINIA CAVE BOARD VACANCIES

Chair Futrell updated the Board on the process for appointments to the Board and shared that the Board has no vacancies.

VIRGINIA CAVE BOARD EMAIL AND WEBSITE

The Board discussed how the Board's email address should be utilized, and staff provided a reminder regarding the requirements of the Freedom of Information Act.

PROCESS FOR GRANT APPLICATIONS

Mr. Stovall discussed the grant application procedure.

VIRGINIA CAVE WEEK

Chair Futrell discussed Virginia Cave week which is June 1 – 7, 2025. The Chair asked for Board members to participate in cave week as well as for a volunteer to be the coordinator. Mr. Shank shared information regarding the Cave and Karst Expo which will be held on June 7, 2025.

Chair Futrell updated the Board on the passing of Phil Lucas' wife, Charlotte Lucas.

ADJOURN

The Board adjourned for a lunch break at 12:41 p.m.

CALL TO ORDER

The meeting was called back to order at 1:20 p.m.

VIRGINIA CAVE AND KARST TRAIL

Chair Futrell provided the Board with updates from the Appalachian Karst Symposium and shared information on the development of an app for Cave and Karst in Virginia.

DCR ENVIRONMENTAL EDUCATION, CAVE AND KARST GAME

Ms. Endo updated the Board on the progress of development of a cave and karst bandana game. DCR communications staff will be available to speak to the Board once the game is ready for distribution.

I-81 EXPANSION AND VDOT REQUEST FOR INPUT FROM CAVE BOARD

Mr. Orndorff presented the Board with some background information on a request for input from the Department of Transportation regarding the I-81 expansion and its proximity to New Dixie Cave.

BOARD ACTION

Mr. Hubbard made a motion to authorize the Board Chair to write a letter on behalf of the Cave Board providing VDOT with recommendations regarding the I-81 expansion.

Mr. Graves seconded, and the motion carried.

ACQUISITION OF NATURAL BRIDGE CAVERNS

Mr. Stovall provided an update and background on the acquisition of Natural Bridge Caverns by the Department of Conservation and Recreation to include the reasoning behind the acquisition and plans for the caverns moving forward.

VIRGINIA CAVE OWNERS' NEWSLETTER

Chair Futrell gave the Board some background information on the development and distribution of the Cave Owner's Newsletter. Mr. Hubbard expressed interest in participating in development of the Newsletter.

EXPLORE VIRGINIA CAVE LICENSE PLATE

The Board discussed ways that the license plate applications could be promoted.

STORMWATER MANAGEMENT HANDBOOK

Chair Futrell provided the Board with an update on the stormwater management handbook and mentioned that it is a living document and that the Department of Environmental Quality has asked the Board for input.

CAVE BOARD BYLAWS

The Board briefly discussed its Bylaws and decided to bring recommendations for revisions to the Bylaws to its next meeting.

PUBLIC COMMENT

There was no public comment.

DATE FOR NEXT MEETING

Staff will poll the Board regarding dates for a meeting in April or May of 2025.

ADJOURN

BOARD ACTION

Mr. Ahn moved to adjourn the meeting, Mr. Hubbard seconded, and the motion carried.