

# Virginia Cave Owners

NEWSLETTER

Issue #37, April 2025

## A Message from the Chair

Hello, Virginia cave landowners! I am Andrea Futrell, the new Virginia Cave Board (VCB) Chair. I first served on the VCB from 2003 to 2007. I was reappointed in August 2024 and elected chair at the September 2024 board meeting. I am a lifelong caver and member of the National Speleological Society. I am a retired karst geologist, formerly working in state government, non-profit organizations, and private industry. I am also a licensed teacher in Virginia and used my cave exploration/geologist/education background to assist the U.S. Forest Service in developing award-winning K-12 curriculum about white nose syndrome and bats.

Cave exploration and surveying in caves around the world and especially here in Virginia are my real passions. I have led and assisted in the exploration and surveying of many of Virginia's longest caves. One of my favorite parts of caving in Virginia is interacting with cave landowners. I love to hear about their connections to their caves and their land. Like our former board chair, Bob Denton, my goal is to protect and conserve Virginia's cave and karst resources, in particular the karst aquifer which serves as the source of drinking water for many of our communities as well as private homeowners in the karst terrain of Virginia. If you have questions or concerns about your caves and karst land, please contact me directly and I will bring them to the VCB.

*Andrea Futrell, Virginia Cave Board*



*Photo by Mike Futrell*

## Table of Contents

- 1 A Message From the Chair**
- 1-2 Mobile Cave Visits Virginia**
- 3 Bland County Sinkhole Cleanup**
- 4 Cave Landowners and Liability**
- 4 Virginia Cave Week**

### A Publication of the Virginia Cave Board

For more information, please contact the Virginia Department of Conservation and Recreation, Virginia Natural Heritage Program, 600 E. Main St., 24th Fl., Richmond, VA 23219, or one of the members of the Virginia Cave Board: Andrea Futrell, chair; Jason H. Carter, vice chair; Steve Ahn; Jacqueline Gooden-Seay; John H.H. Graves; David Hubbard; Russell H. Kohrs; Stephanie Lillard; Allen L. Louderback; Andrea Reese; Austin Shank.

## Mobile Cave Visits Virginia

***Provides Exciting Educational Experiences to Thousands***

*By Dave Jackson and Zenah Orndorff*

Imagine yourself as a child putting on a real caving helmet with light and entering a beautifully decorated cave complete with cave paintings, ancient pottery, and the sparkle of calcite and gypsum formations. As you explore, you find numerous pathways and chambers to venture through, with rope ladders that you can climb to access multiple levels of the cave. This is the experience that nearly 5,000 children and adults had this summer and fall at 13 days of CaveSim events around Virginia. Despite the name, there is nothing virtual about CaveSim. Kids and adults from around Virginia put on helmets and explored a mobile cave brought to the state from Colorado. The CaveSim system is housed in a 31-foot trailer and contains 150 feet of highly realistic cave passage on three physical levels, including a wheelchair accessible portion. As participants explore, they encounter stalactites, stalagmites, indigenous art and artifacts, and cave animals like bats, salamanders, and a pack rat. All of the objects are physical, three-dimensional replicas, and as you explore, you must try your best to avoid touching the objects. Each object contains sophisticated electronics that detect when the object is touched (or even approached carelessly). If you touch a fragile object, the item lights up, makes a sound, and deducts points from your score on the scoreboard outside the cave. Some of the objects even have educational audio recordings connected to them to help visitors learn about cave conservation. The more careful you are about not disturbing the cave, the better your score. After you exit the cave, you review your careful-caver score on the computer interface, and have the opportunity to try again to get a better conservation score.

The experience of exploring CaveSim is awe-inspiring, and helps children and adults be enthusiastic about cave-related science, conservation, and exploration. After they exit the cave, participants are excited to learn additional lessons from facilitators. In Virginia, the CaveSim programs were facilitated by several CaveSim staff, local and state parks staff, and many volunteers from local caving clubs, the Virginia Cave

*continued on page 2*

## Mobile Cave Visits Virginia

*continued from page 1*

Board, Cave Conservancy of the Virginias, and other organizations. The facilitators taught numerous lessons about topics such as bat skeletal morphology (with a real bat skeleton), cave history (with a working carbide lamp), cave search and rescue (with working cave rescue telephones and a real rescue stretcher), and more. Participants also loved getting the chance to learn about vertical cave exploration and rescue on the 12-foot-tall CaveSim ropes tower. By putting on a simple seat harness and helmet, participants could be lifted up the tower by a facilitator and other participants. The ropes tower included two pulley systems which allowed participants to compare a 5:1 and 1:1 mechanical advantage.

In order to reach as many participants as possible, the Virginia events were held at a wide variety of locations in several parts of the state, including Bristol, Richmond, Harrisonburg, Roanoke, Blacksburg, and Luray. Event locations included an elementary school, several state and local parks, a children's museum, and several show caves. The programs were all free and open to the public, and reached a wide demographic, including a group of people with disabilities and a group of children who came to a park by themselves to play basketball. Seven of the 13 days of programs were held in July, and organized by Zenah Orndorff and Meredith Weberg, who applied for a grant from the Cave Conservancy of the Virginias. Orndorff also secured funding from the Blacksburg Volunteer Rescue Squad and numerous individuals around Virginia. Even before the seven days of program in July began, several organizations were asking if CaveSim could come back for events in the fall, including for GO Fest in Roanoke. As a result of these requests, CaveSim came back to Virginia from Colorado in October for six days of events. These programs were funded by the City of Roanoke, the Virginia Department of Conservation and Recreation (DCR), and Luray Caverns. The fact that organizations were asking for additional programming even before seeing the July programs speaks volumes about the value of the education provided by the CaveSim experience.

The Virginia events were especially exciting because they featured a brand-new version of the mobile CaveSim exhibit, complete with a wheelchair accessible portion. The new trailer was completed



*Dave Jackson,  
CaveSim CEO*

in June, just weeks before the first Virginia programs. CaveSim systems are designed and manufactured by CaveSim LLC in Colorado Springs, and CaveSim inventor and CEO Dave Jackson facilitated all of the Virginia events. Jackson is a graduate of MIT, and he and his team manufacture all of the artificial speleothems, electronics, software, and cave passage. The team has built other CaveSim systems, including a mobile unit for the National Park Service and a permanent installation in a rock climbing gym in Colorado Springs. The CaveSim fabrication team is currently working on two new mobile caves which will be available for other organizations to purchase for educational purposes. Jackson invented the CaveSim concept after seeing a real cave get damaged during a search and rescue practice in 2008. Jackson's goal is to provide CaveSim systems to more organizations so that children and adults around the country can learn about the joy of exploration, the wonders of science, and the importance of taking care of beautiful natural places. ■

*Left: A participant explores the multi-level CaveSim passage. Right: Jesse Rochette of CaveSim and Wil Orndorff prepare a group of young participants for their CaveSim experience. Photos by Zenah Orndorff*



# Bland County Sinkhole Cleanup

By the Virginia Region Conservation Committee and Meredith Weberg

The last weekend of April 2024 saw nearly 30 Virginia Region (VAR) cavers pitching in (sometimes literally!) to help clean out a sinkhole at the request of a local landowner. She had read in the *Virginia Cave Owners Newsletter* about the Virginia Cave Board partnering with the VAR Conservation Committee to offer free sinkhole cleanout services. Her sinkhole had been used as a dump site over the decades. There are several large cave systems in Skydusky Hollow where this sinkhole is and at least one known cave on the landowner's property. It was our hope to find a new cave and maybe help clean up her drinking water. At the very least, we would have made a cave owner happy.

Cleaning out a sinkhole takes a lot of people. That means you have to provide certain things—lunch would be nice, drinking water, and porta johns. Oh, and dumpsters for the trash. These things cost money. The committee had about \$800 left over from previous sinkhole cleanup grants (from Cave Conservancy of the Virginias, Richmond Area Speleological Society, and National Speleological Society (NSS)), but knew it would not be enough. Enter the NSS and its conservation grant program. We were given a generous grant that was enough to make our project a success!

We got to work on Friday evening and removed an old sofa frame and some trash. Vines had entwined themselves throughout the debris and old wood and we spent hours cutting them away. We returned on Saturday. We had been offered a “mini-excavator” but when it arrived, it turned out to be a very large machine — even larger on a huge flatbed. I was flabbergasted by the enormity of it as it drove down the hillside to get closer to the sinkhole.

With these machines it did not take long before most of the debris had been removed from the sinkhole. While they worked at the edge, the cavers stayed out of the way and made piles of what had been removed. Some of it could rot and some had to be hauled away. We tried to save any metal that could be recycled even though that county does not have a recycling facility. Once the machines cleared out, the cavers set to work removing the smaller rocks (football-sized and smaller) and threw them on a pile. That was so we could get to the broken glass and roof shingles. Sometime in the late afternoon, we realized we needed to toss all those rocks back into the sinkhole so that cows would not get in it.

We had cavers from all over VAR. Some came up from North Carolina. Many Virginia Tech (VPI Grotto) cavers came. It was a group effort and we were rewarded by the landowner with getting to visit her cave. She was so grateful for all the workers and how hard we worked. Altogether we put in about 320 volunteer value hours.

If you are interested in having a sinkhole on your property cleaned out, please contact the VAR Conservation Committee through Meredith Hall Weberg, [merecaver@yahoo.com](mailto:merecaver@yahoo.com). It will take some time to arrange for an onsite assessment and scheduling. ■

*A landowner enlisted the help of volunteers to remove an old sofa frame, trash, and other debris from a sinkhole, improving the quality of her drinking water. Photo by Meredith Weberg*



## Cave Landowners and Liability

by Andrea Futrell

Yikes! Liability? Lawsuits? Lawyers? These are definitely words that cave landowners don't want to hear about with respect to caves on their property. The good news is that the Virginia Cave Protection Act exempts cave landowners from liability for injuries to people visiting their caves, provided the landowner is not charging people to use their land and their cave. The Virginia Cave Protection Act (<https://www.virginiacaves.org/va-cave-law>) specifically states: “Neither the owner of a cave nor his authorized agents acting within the scope of their authority are liable for injuries sustained by any person using the cave for recreational or scientific purposes if no charge has been made for the use of the cave...” (Chapter 10.1-1008).

If you are a new cave landowner, you might be wondering what cave resources you own. The Virginia Speleological Survey (VSS) can assist you in locating your cave resources and provide you with available documentation. You can reach the VSS at: <https://www.virginiacaves.org/contact-us>. ■

## Virginia Cave Week

**June 1-7, 2025**

The Virginia Cave Board will have  
special events throughout the week  
throughout the Commonwealth.

See <https://vacaveweek.com>  
for information.



*Virginia Region Cavers pitch in to clean out a sinkhole in Bland County.  
Photo by Meredith Weberg*