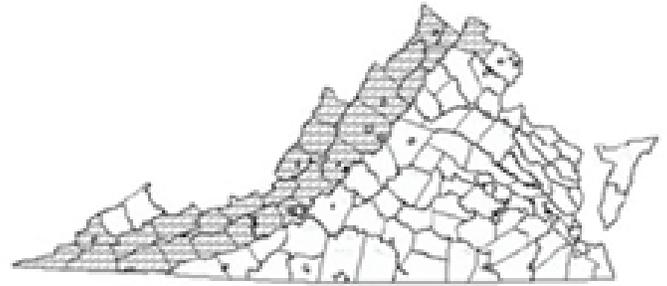

VIRGINIA CAVE OWNERS' NEWSLETTER

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A PUBLICATION OF THE VIRGINIA CAVE BOARD, DEPARTMENT OF CONSERVATION AND RECREATION No. 25, MAY 2013

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Thanks to contributors: Wil Orndorff, Rebecca Stewart, and Meredith Hall Weberg

Note: This will likely be the last printed *Virginia Cave Owners' Newsletter*. The Virginia Cave Board will continue to publish the newsletter sporadically, but our primary means of getting it to you will be via email. Please make sure your current email address is on file with us by contacting Larry Smith (see Chairman's Column). We welcome ideas for articles.

Chairman's Column

by Meredith Hall Weberg 

Greetings, Virginia Cave Owners!

I am really excited by what the Virginia Cave Board has been involved with lately.

We are spearheading an effort to create a statewide driving/walking trail called the **Virginia Cave and Karst Trail (VCKT)**. The VCKT will encompass actual walking trails, as well as karst features in various parts of the state, all with the idea of helping our citizens and visitors learn more about caves and karst. Sometime this year we will be posting a new website for the

VCKT. There will be an interactive map with stops and trails along the VCKT. Click on a spot and up will pop a brief description of that particular site. I have hiked a couple of the existing karst trails; they are beautiful walks in woods where you bask in the peacefulness.

If you as a cave owner have questions or needs, please contact any of us on the Cave Board. We are here to help! You may reach us through Larry Smith, our advisor at the Virginia

Department of Conservation and Recreation, Larry.Smith@dcr.virginia.gov.

I hope you all are doing well and finally getting to enjoy warm weather. Thanks, as always, for taking good care of the caves of the Commonwealth! 

(The small graphic next to this article title is the cave map symbol for columns, speleothems that are formed when a stalactite grows down and a stalagmite grows up, and they meet in the middle.)

We're on the Web! Visit us at:

http://www.dcr.virginia.gov/natural_heritage/cavehome.shtml



What Can Cave Conservancies Do For You? A Landowner's Guide

By Rebecca Stewart, DCR Karst Protection Assistant

Cave conservancies are nonprofit organizations dedicated to protecting cave and karst resources while allowing appropriate access to caves for scientific, educational, recreational, and training purposes. While many conservancies own caves, they also work to help landowners shoulder the burden of cave management. Every cave is different. In addition to safety concerns, a well-informed cave manager must take into account factors such as the presence of rare cave-adapted animals, delicate formations, underground streams, artifacts, fossils, and hibernating bats. Cave conservancies can help landowners manage caves by sharing their experience, gathering information on resources of specific caves, and performing conservation and restoration projects. Projects performed or funded by cave conservancies include:

- Designing and constructing bat-friendly cave gates to control access
- Restoring caves and sinkholes through trash removal
- Installing fences around caves and sinkholes to exclude livestock
- Educating citizens and government agencies on the nature and value of cave and karst resources and their sensitivity to disturbance
- Establishing cave preserves through donation or fee-simple purchase
- Developing cave management plans in collaboration with landowners
- Assisting cave owners in resolving legal and other management issues
- Performing water tracing experiments to determine the courses of subterranean rivers

Donation of conservation easements to land trusts or foundations can help protect natural resources by placing limits on future land use or subdivision while maintaining the majority of personal property rights. Donation of such easements often comes with significant tax benefits to the donor. Cave conservancies have the expertise to help owners see that cave and karst resources are treated

appropriately in such easements.

Cave conservancies range from local organizations to regional and national ones. If you think a cave conservancy could help you out, please contact one of the following organizations that are active in Virginia.

Cave Conservancy of the Virginias



www.caveconservancyofvirginia.org/
Contact: Bonnie Whitlock, cavecv@aol.com, 804-798-4893

The Cave Conservancy of the Virginias (CCV) is a nonprofit organization dedicated to the protection, management, and study of caves and karst resources in Virginia and West Virginia. Much of CCV's focus is on helping fund other nonprofit organizations' cave- and karst-related projects through the awarding of grants. As an owner of a cave or significant karst area in Virginia, you may have a sinkhole or cave that needs to be cleaned up, fenced off, or gated. CCV has been involved with many such projects and may be able to assist you with this or other similar projects. Typically, local cavers or other nonprofit groups provide the personnel, and CCV helps to defer the costs of materials and/or other expenses.

Mid-Atlantic Karst Conservancy, Inc.

<http://www.karst.org/>
Contact: Jeff Jahn, pghrocks@comcast.net, 540-533-0247

The Mid-Atlantic Karst Conservancy (MAKC) mission is the study, conservation, and preservation of caves and karst resources and the education of the public about those



resources. MAKC is centered in Maryland, Pennsylvania, West Virginia, and the Shenandoah Valley in Virginia. It is known for creative solutions to cave management and access challenges. MAKC now manages over 40 caves on more than 5,000 acres and owns three preserves. MAKC also focuses on karst education, whether it's partnering with scouting groups and schools or working with property owners to clean out sinkholes. MAKC continues to grow and is unique because it has a regional cave library and education center that houses an extensive collection of domestic and international caving books, historical photos, and periodicals donated by cavers and landowners over the years. Whether it's surveying a cave or working together to protect the watershed, MAKC strives to protect caves and karst while helping achieve the wishes and desires of landowners.



The Nature Conservancy: Southwestern Virginia

<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/virginia/placesweprotect/clinch-valley-program-1.xml>
Contact: Steve Lindeman, slindeman@tnc.org, 276-676-2209

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters on which all life depends and its global vision is to leave a sustainable world for future generations. Locally TNC has worked with the people of the Clinch Valley to protect the region's special lands, waters, and wildlife. TNC also works with local farmers and other



rural landowners to safeguard streams, rivers, and caves from water pollution. This region is one of the areas in Virginia with the most biologically important karst and cave systems. TNC can steer cave landowners to other conservancies or to a conservation solution if they are interested in either selling or placing an easement on a property with an important cave on it.

Virginia Speleological Survey



<http://www.virginiacaves.org/>

Contact: Rick Lambert, caves@htcnet.org, 540-468-2722

Virginia Speleological Survey (VSS) is a nonprofit volunteer organization

that collects and maintains information concerning the caves and karst resources in the Commonwealth of Virginia. VSS is dedicated to recording, preserving, and protecting the caves and karst resources while interacting with and exchanging information among VSS Directors, Virginia Region cavers, cave owners, and the general public. Its primary mission is to gather and maintain an informational and survey database on caves. VSS can assist county surveys and other survey projects by providing appropriate information from the data file, offering manpower, or in any other way that it can help. VSS hopes that its database of caves and surveys will grow with the support from the cavers and landowners alike.



West Virginia Cave Conservancy

<http://wvcc.net/>

Contact: Bob Hoke, bob@rhoke.net, 301-725-5877

The West Virginia Cave Conservancy (WVCC) is dedicated to conserving and protecting important cave and karst resources of the Virginias for future generations. WVCC owns four caves and manages three others. It protects historically significant caves containing Civil War saltpeter workings; caves with bat habitats; and caves with rare, delicate formations that are subject to development. WVCC is primarily active in West Virginia, but Island Ford Cave near Covington, Virginia, is one of its most heavily visited preserves. WVCC is a good fit for Virginia landowners in neighboring counties looking for an experienced partner in managing significant caves. 

An Update on White-Nose Syndrome in Virginia

By Wil Orndorff, DCR Karst Protection Coordinator

February 26, 2013

For the fifth consecutive winter, bats hibernating in Virginia's caves continue to suffer from white-nose syndrome (WNS), a fungal disease that has had devastating effects on several species. Of the seven bat species that hibernate in caves of the Commonwealth, the six that are known to contract WNS have been affected to varying degrees. Mortality rates have been the highest among the most common cave bat species, greatly reducing the total number of bats present in most caves.

On February 10, 2013, the National Park Service announced that WNS had been discovered at caves in Cumberland Gap National Historic Park in Lee County. Entering this winter, Lee County was the only county in Virginia with significant numbers of caves where WNS had not been observed. The unfortunate arrival at the park came as no surprise to state wildlife biologists with the Virginia Department of Conservation and Recreation Natural Heritage Program and Department of Game and Inland Fisheries, who had

discovered WNS in adjacent Wise (2011) and Scott (2012) Counties.

Recent research publications have confirmed what most bat biologists had already come to believe: WNS transmission is dominantly the result of bat-to-bat interaction. While it is possible for cavers to transport spores on equipment and clothing, this is probably an insignificant factor in the spread of the disease, except in cases where spores are carried across boundaries over which bat populations have little to no contact. Because of this, anyone visiting caves in Virginia or other WNS-affected areas—which now include most states east of the Mississippi—should never take their gear or clothing into caves or mines in areas unaffected by WNS. The national WNS range map can be found online at <http://whitenosesyndrome.org/>. Fortunately, no major range extensions for WNS were documented in 2012, suggesting that its spread may be limited by the distribution of caves with high populations of susceptible species.

Not all cave bat species are equally affected by WNS. Mortality rates in excess of 90 percent have been documented among little brown (*Myotis lucifugus*), tricolored (*Perimyotis subflavus*), and northern long-eared (*Myotis septentrionalis*) bats in Virginia at sites where WNS has been present for three or more years. In several Virginia caves that each housed thousands of little brown bats prior to WNS, literally only a couple percent remain. Reductions in observed numbers of the federally endangered Indiana bat (*Myotis sodalis*) in Virginia have been lower and more variable. At some WNS-infected sites there has been little to no change, while declines at others have approached 75 percent. Impacts to the WNS-susceptible eastern small-footed bat (*Myotis liebigii*) are difficult to estimate due to low population numbers and a lack of focused study prior to WNS.

On the brighter side, the big brown bat (*Eptesicus fuscus*) is known to develop WNS, but with little to no mortality from the disease. The federally





endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*), which uses caves year-round and shares caves with WNS-infected bats of other species, appears to be immune to WNS. White-nose syndrome has not been observed to affect any of the eight tree bat species found in Virginia.

Not known to winter in Virginia, tens of thousands of gray bats (*Myotis grisescens*) come into the mountain empire of southwestern Virginia each summer to forage and raise their young before returning to caves in Tennessee in the fall to hibernate. Gray bats have been exposed to *Geomyces destructans*, the fungal pathogen that causes WNS, since 2010. WNS was confirmed to affect gray bats during the winter of 2012. Fortunately, significant die-offs of gray bats from WNS have not been observed. Only time will tell the degree to which they can tolerate the disease, but so far things appear hopeful. It is possible that WNS in combination with other factors such as climate change may lead to the northern expansion of

gray bats into parts of western Virginia formerly dominated by little brown bats, which have a similar foraging habitat.

The Center for Biodiversity has petitioned the U.S. Fish and Wildlife Service under the Endangered Species Act to list the northern long-eared and eastern small-footed bats as endangered, and the little brown bat is also under consideration for legal status. Designation as an endangered species provides extensive legal protection at the federal level and also makes research and protection projects involving these species eligible for special federal funds. In several states, WNS-affected species are being considered for protection under state endangered species laws. No formal proposals for listing under the Virginia Endangered Species Act have yet been submitted.

As a cave owner, there are a few things you can do to help our cave bats in their struggle. Encourage visitors to your cave to avoid disturbing bats and to report the numbers and types of bats

they see to the Virginia Natural Heritage Program (804-786-7951) or Department of Game and Inland Fisheries (540-248-9386). Photos can be a great help. Equally important is protection of summer roosts. Little brown bats raise their young from early May through the end of July, quite often in warm places in houses, barns, and other buildings. Little brown bats and big brown bats are particularly fond of attics, shutters, and wall cavities. If you or people you know have bats roosting in buildings, please leave them alone until they have left the roost for the season. Openings through which the bats are entering or exiting can then be sealed without fear of trapping the animals. Scientists with the Virginia Natural Heritage Program and the Department of Game and Inland Fisheries, listed above, are interested in documenting and investigating these summer roosts to determine how bats are doing outside of caves and to explore connections between summer and winter habitat through banding studies. 

Department of Conservation and
Recreation, Division of Natural Heritage
217 Governor Street, 3rd Floor
Richmond VA 23219-2010
RETURN SERVICE REQUESTED

For more information please contact the Virginia Department of Conservation and Recreation, Division of Natural Heritage, 217 Governor Street, 3rd Floor, Richmond, VA 23219 or one of the members of the Virginia Cave Board: Ms. Ruth Blankenship, Dr. Robert Denton, Dr. Daniel H. Doctor, Mr. John Graves, Mr. Richard Lambert, Mr. Thomas Lera, Mr. Steve Lindeman, Ms. Judy Molnar, and Ms. Meredith Weberg.