Virginia Cave Board
June 8, 2013
Ivy Creek Natural Area
1780 Earlysville Road
Charlottesville, VA 22903

Virginia Cave Board (VCB) Members Present
Robert Denton, Jr.
Dan Doctor
John Graves
Rick Lambert
Steve Lindeman
Judy Molnar
Meredith Weberg

Virginia Cave Board Members Absent
Ruth Blankenship
Tom Lera
Roger Kirchen, representing Dept. of Historic Resources

Department of Conservation and Recreation (DCR) Staff Members Present
Julie Buchanan [present during Joint Work Session only]
Wil Orndorff
Larry Smith

Guest
Michele Baird

Chairman Meredith Weberg called the meeting to order at 2:04 p.m.
Meredith Weberg observed that the Joint Work Session format begun in the previous VCB meeting (where Technical Committee and Education and Outreach Committee issues are discussed together prior to the public meeting) is working well and will continue. Each issue discussed is summarized below.

Introductions and Announcements
VCB members and DCR staff present introduced themselves and welcomed VCB nominee Michele Baird to the meeting.

A new PDF entitled "Caving Protocols in Response to White-Nose Syndrome in Virginia April 30, 2013" was posted at http://www.dcr.virginia.gov/natural_heritage/cavehome.shtml after VCB members drafted and edited the guidelines via email.

Since the last meeting in February, the VCB was notified that the Department of Mines, Minerals and Energy (DMME) posted a PDF of Dr. John R. Holsinger's 1975 Monograph *Descriptions of Virginia Caves* (Bulletin #85) on its publications website. After an email discussion among

VCB members, Ms. Weberg contacted DMME and requested that Bulletin #85 be withdrawn from free online public access, due to concerns about the disclosure of certain sensitive caves' locations. After consideration, DMME removed the publication.

Approval of Minutes

MOTION: Ms. Weberg moved that the minutes of the meeting of February 16, 2013, be approved as amended by email.
SECOND: Rick Lambert seconded the motion.
VOTE: The motion passed unanimously.

Treasurer's Report

Larry Smith reported that the current balance of $1608 reported at the last VCB meeting remains the same because other funding was used to print and mail the May issue of *Virginia Cave Owners' Newsletter* (VCON) (see Karst Program Update below). Other possible sources of funds, bought up by guest Ms. Baird, were discussed for upcoming VCB projects.

DCR Karst Program Report

Wil Orndorff's report is presented here.

Bats and White-Nose Syndrome (WNS)

Hibernacula surveys of Virginia's significant documented cave bat hibernacula were completed in late February. As previously reported, White Nose Syndrome (WNS) now affects the entire cave and karst region of Virginia. Populations of Little brown, Tricolored (pipistrelle), and Northern long-eared bats are reduced by over 90%, and essentially extirpated locally. Indiana bats are affected, but quantification of the impact is difficult because of possible relocation of colonies following little brown bat die-offs. Eastern small-footed bats are affected, but low population numbers and a lack of pre-WNS data make it nearly impossible to quantify affects. Big brown bats show no changes in numbers, though the species does harbor the fungus, *Geomyces destructans*, which causes White Nose Syndrome. Virginia big-eared bats continued to be unaffected despite exposure to the pathogen. Gray bats, which in Virginia are only known in the Upper Tennessee River Basin, are not experiencing die-offs despite several years of exposure to the pathogen and confirmation of the disease in some Gray bats in 2012. Currently, summer surveys for Northern long-eared bats are underway, and this species is all but absent in areas where WNS has been known for more than 1 year.

Virginia Cave Week

As part of the Virginia Cave Week celebration, DCR staff worked with Cave Board members Bob Denton and Dan Doctor, as well as members of the Front Royal and Tri-state grottoes (caving clubs) to host an open house at Ogdens Cave Natural Area Preserve in Frederick County. Over the course of three days, almost three hundred people visited the preserve, with most visiting the entrance section of the cave. Attendees included DCR Director David Johnson and Secretary of Natural Resources Doug Domenech.

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Karst Hydrology and Cave Invertebrate Biology
Sarah Eagle of Virginia Tech completed her graduate degree thesis on the hydrology of the James Cave (Pulaski County, VA) epikarstic drip system. DCR works with Virginia Tech to maintain a long-term observatory of epikarst drip rate, chemistry, and biota. The goal is to develop a better understanding of the role of epikarst in aquifer recharge, which has implications for water supply planning, biodiversity conservation, and water quality protection. Sarah's thesis is available online at from Virginia Tech libraries [link inserted: http://vtechworks.lib.vt.edu/handle/10919/22033]. DCR staff will be presenting a paper on the James Cave observatory at the 2013 National Speleological Society (NSS) Convention, and a journal article is in preparation.
At the convention, staff will also be presenting talks on Madison Cave isopod habitat monitoring and the Ellett Valley millipede status update project.

***Virginia Cave Owners' Newsletter* (VCON)**
Staff updated the cave owners' newsletter mailing list, and worked with DCR's Julie Buchanan to arrange printing and mailing of the May issue. Virginia Correctional Enterprises (VCE) printed the newsletter, and it was mailed by the Virginia Industries for the Blind (VIB). Total cost for printing and mailing was ~$900 for 1600 4-page newsletters distributed by regular mail.

Young-Fugate Cave, Lee County
Staff worked with the Cave Board to respond to citizen concerns about potential land development overlying Young-Fugate Cave in Lee County. Staff met with stakeholders in June, and currently the situation is unresolved. Fortunately, the property in question is small, and is near the downstream end of the system. Efforts should be made to provide protection to the upstream end of the system as well as the watershed of the sinking stream. The state listed Young-Fugate cave beetle (*Pseudanophthalmus holsingeri)* is endemic to the cave, which also houses transient populations of the federally listed Gray bat.

The karst protection coordinator will be attending a week-long National Cave Rescue Commission Level One training in July.

***Virginia Cave Owners' Newsletter* (VCON)**
Mr. Smith mentioned that there is an archive of extra copies of this most recent and several other previous issues. Discussion revolved around what purpose these extra issues can be used for and where to store them. Ms. Weberg suggested that the more recent issues would be good for display at conferences or conventions. Ms. Weberg expressed thanks to Mr. Orndorff, Mr. Smith, and Ms. Buchanan for their work in getting the VCON printed and mailed.

George Bowers, the author of a cave poem sent to Robert Denton, Jr., was successfully contacted by Ms. Weberg and has granted permission to publish his poem in the next VCON, hopefully in 5 or 6 months. Other upcoming article topics were discussed.

Virginia Cave Week (VCW) April 21–27, 2013
Ms. Weberg thanked all who worked on the events, getting the word out, the lesson plan, and updating the VCW website.

Judy Molnar reported that Grand Caverns offered discounted tours for that week but attendance did not increase. Only one family asked for the discount. In contrast, John Graves reported that Luray Caverns announced the VCW discount on Twitter and Facebook, gave the discount to everyone who purchased tickets during Cave Week, had an increase in visitation, and suffered no loss in revenue.

Ms. Weberg observed that several newspapers published articles on the Ogden's Cave event during VCW. After Ms. Baird said she never heard of this event, discussion began on how effective publicity efforts about the event and the resources at the VCW site have been. Ms. Baird suggested using Virginia Association of Science Teachers (VAST) and Virginia Earth Science Teachers' Association mailing lists, both of which she subscribes to, for advertising the VCW site and its educational resources. She also suggested the VCB be present at or create a VCW brochure for the VAST conference in November. Ms. Baird and Ms. Molnar discussed how teachers need a long lead time to take advantage of any discounts for field trips to caves.

DCR staff and VCB members who participated in the Open House held at Ogdens Cave felt it was a great success in educating participants to caves, karst, land cover, hydrology and conservation issues. Ms. Weberg expressed her hope that several other caves would consider doing the same, and spots should be reserved way ahead of time.

Ms. Weberg mentioned the need for a new lesson plan for next year's VCW.

Virginia Cave and Karst Trail (VCKT)

Ms. Buchanan announced that the current draft of the Virginia Outdoor Plan is going to the DCR Director in the next few weeks. Language encouraging the formation of a VCKT is in this plan.

Ms. Buchanan and Ms. Molnar presented the VCB with three basic draft logo designs for the VCKT developed by DCR graphics designer Betty Saxman after email and phone discussions. Each basic design was shown in two black-and-white formats, one in white font and one in black font. One design was also produced in a banner format. The pros and cons of each design and font were discussed by all present. Several color combinations were also suggested. Members of the VCB voted on one design that will be returned to DCR for work up into several versions that include color and a different font option, to be narrowed down and voted on via email. Ms. Weberg thanked Ms. Buchanan and Ms. Saxman for their work on the logos.

Mr. Graves offered to help put the VCKT brochure together and print it once the logo is finalized. Ms Weberg offered to help with brochure editing and Dan Doctor volunteered to help with the brochure and the online map.

Ms. Weberg announced that several commercial caverns have replied positively to her invitation to be listed on the VCKT. Dr. Doctor mentioned there are 12–15 candidate sites mapped on his Google Earth VCKT map. Ms. Weberg suggested VCB set a goal for the first "sign planting" in April of next year in time for Virginia Cave Week. Dr. Doctor asked VCB members for help in submitting photographs to him for the sites that could be posted on the VCKT website once launched.

Sinkhole Guidance Document

Mr. Denton announced that his paper, "Developing a Standard Practice for Karst Assessment," submitted to the 13th Sinkhole Conference [held in Carlsbad, New Mexico in May 2013] was well received and was published as the lead paper in the engineering section of the conference paper publication. Mr. Denton and Dr. Doctor are putting together a shortened document from this paper, hoping that the current lull in land development gives them a good opportunity to create a useful Virginia-relevant guidance document for future sinkhole remediation. Mr. Denton explained that Virginia Department of Transportation sinkhole guidance documents focus on remediation from roads, while those of soil and water conservation districts focus on other situations. Dr. Doctor explained that they were taking best management practices from both documents to create their VCB sinkhole remediation guidance document. The draft document will be distributed via email for VCB comment and discussion.

Land Conservation Report

Steve Lindeman discussed ongoing work by The Nature Conservancy (TNC), DCR, Virginia Department of Environmental Quality, United States Fish and Wildlife Service, and other partners to conserve the watershed of the Thompson Cedar Cave system to protect the Lee County cave isopod in that cave system, as well as additional federally endangered mussel and fish species found in the Powell River. Several parcels may become available soon and it may take several years to protect these properties which cover about 400 acres. The recent recovery of Lee County cave isopod populations, due to conservation efforts begun in 1992, may lead to its delisting as a federally endangered species in the future. Discussion began on having future VCB meetings in this area to show VCB members first-hand the conservation successes and needs here.

Mr. Smith continues to work with the owners of a significant cave in Augusta County to place a permanent conservation easement on that property.

Mr. Orndorff announced that a new natural gas power plant is coming online in Warren County, to replace an old coal plant coming offline. The power plant is sited over habitat and adjacent to a documented location for the federally listed Madison Cave Isopod (*Antrolana lira)*. Dominion Energy worked with the US Fish and Wildlife Service, the Virginia Department of Game and Inland Fisheries, and Virginia DCR Natural Heritage Program to develop a Habitat Conservation Plan for the project, which includes actions to both monitor this species and its habitat and protect two caves where this species occurs. . Dominion has funded the purchase of an open space easement on land owned by Warren County to protect the Madison Cave Isopod, where the county plans to construct an "Isopod Trail" that will be open to the public and that can be added to the VCKT.

Current Board Vacancies

Mr. Smith announced that two names have been submitted to the Governor's office for appointment to the VCB. As of this meeting, there are two vacancies and in the next month there will be two more. Mr. Smith requested more nominees from current members. Some former VCB members' names were brought up to be approached. Mr. Smith reminded members that anyone they know who might be interested can nominate themselves to serve by filling out an

online nomination form at
http://www.commonwealth.virginia.gov/stategovernment/Appointments/appointments.cfm.

Voluntary College Internships for College Graduate students
After the last VCB meeting, Mr. Lera sent via email a brief job description for a college intern who would help out with various computer-related VCB projects. The question arose as to who would be available to supervise this intern. Discussion concluded that it would be impractical at this time for any DCR staff to take on this responsibility. Ms. Weberg permanently tabled the internship.

New Business
Mr. Orndorff suggested that the VCB send a formal letter to thank State Geologist Dr. David Spears for his help in removing Bulletin #85 from the DMME website. Ms. Weberg agreed to do so.

Mr. Denton announced that before former VCB member Barbara (Babs) Bodin moved out of Virginia, she gave him her files from her job at Crystal Caverns-Hupp's Hill Battlefield. The Cedar Creek Battlefield Foundation (CCBF), new owners of Crystal Caverns since its closure in 2010, was not interested in these files. Ms. Bodin's files revealed that the site had submitted qualifying documents to be listed in the National Park Service's National Register of Historic Places and was awaiting official listing when it closed. Mr. Denton was unsure if the new owners are aware of this. Mr. Lambert, VCB liaison to Crystal Caverns, asked VCB if he should offer these documents to the CCBF. Mr. Smith suggested that Mr. Roger Kirchen, representing the Virginia Department of Historic Resources on the VCB, may be a better person to approach CCBF on this possible federal listing and resolve any questions the CCBF may have.

Board Service Recognition
Mr. Larry Smith recognized the contributions of the following former VCB members: David Socky, David Culver, John Holsinger, Babs Bodin, Tom Lera, and Judy Molnar. Ms. Molnar was presented with a plaque recognizing her nine years of service to the VCB. Similar plaques will be prepared for each of the outgoing members of the Cave Board.

Public Comment Period and Announcements
Dr. Doctor announced there will be a Geological Hazards Forum from July 30 to August 1 in Harrisonburg at James Madison University. The forum will include karst-related hazards such as sinkholes.

Mr. Smith thanked Mr. Lindeman for suggesting the use of Ivy Creek Nature Center's Education Building for this meeting, and asked him to convey the Board's thanks to Tatyana Patten for waiving their rental fee.

Date for Next Meeting
Ms. Weberg reminded those present that at the next board meeting new officers will be nominated and elected for all positions. VCB members discussed and agreed on November 9, 2013, as the date for the next Board meeting, to be held at the DCR offices in Christiansburg.

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Ms. Weberg adjourned the meeting at 3:23 p.m.

Submitted by Ms. Judy Molnar

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