West Virginia Cave Conservancy

"Preserving the cave and karst resources of West Virginia for future generations"

Number 12  Summer 2007

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Table of Contents

3 New President's Message
3 Save the Date!!
4 WVCC Membership Update
4 The Inevitability of Change
5 WVCC No Longer Accepts Credit Cards
5 Donaldson Cave Clean-Up
5 Maxwellton Sink Cave Project Continuing...
5 Island Ford Cave Update
5 Lightners Cave Update
6 Have I Got A Deal For You!
7 Rapps Cave Gate
9 Rapps Cave Gate Personnel
10 Rapps Cave Gating Project
11 Snippets on Rapps Cave Gating
11 Thoughts on Cave Gating
New President’s Message
By Bob Handley

Hello Everyone,

WVCC had a very nice banquet last November but at our annual meeting the next day, Jeff Bray announced that he was going to step down as President at our spring meeting in Cass on April 28th (bummer). After considerable soul-searching I decided to seek the position and was elected by our Board of Directors to be our third president at that April meeting. Now WVCC has had Ed Swayne, Jeff Bray, and now RHIH (some of you may have seen those initials before).

Ed got us started with the management of Lobelia Saltpeter Cave and the lease of Rapps School Cave. Then came the purchase of Lightners (an entrance to McClung’s Cave) and the donation of Island Ford Cave. Ed also got our Banquets started and managed them for a number of years. Then Jeff stepped in with great enthusiasm and we purchased Persingers (an entrance to Benedict’s Cave) and arranged the management of Haynes Cave. Jeff led the dig into and then arranged the lease of the Max (9 miles now and still surveying). He also acquired title to Donaldson’s Cave as a donation. He has been very strong on Conservation—initiating and managing the installation of storm drain markers in a number of cities. These guys have produced hard acts to follow.

WVCC is now a well-established conservancy. We have eight properties—own four, lease two, manage two—in eight years. It’s taken a lot of effort, but you all—our members—have been the ones who’ve carried us. But the membership hasn’t grown. We need more members! To change this I’m creating an Ad Hoc Committee called Membership Development (it will be temporary at least till the next Board meeting in July—only the Board can name regular committees and committee chairmen). I’ve appointed Susi Weston as Chair and she will work with Pauline Apling, our Membership Secretary, to bring in new members and hopefully to re-up most of those who’ve dropped out.

I’ve asked Cliff Lindsay to chair Fund-Raising. Other Committee chairs will be listed soon as I can get with Jeff for the current list. Meredith Hall Johnson will replace Tim Brown (who has resigned as a director) as Property Manager for Lightners. She’s still The Open Cave editor. We’re going to need more photos of our cave properties for future Open Cave articles—action shots too.

There are several neat caves we’ve been working on, but there’s been little progress. One of these is tied up in heir disputes and litigation has gone on so long that the original judge died. Now they have to start all over from the beginning with a new judge. (Talk about due process?) I want to set up an Ad Hoc Committee of Region Coordinators to oversee County Cave Scouts to work with Acquisition Committee Chair Frank Abbato. Frank noted that only certain ones of us should actually deal with cave owners so far as acquisitions go. The Cave Scouts will be the ones to find potential caves that may be available. The idea comes from the way the Virginia Speleological Survey is set up. I want these people to shake the bushes and check under every rock for caves we can acquire. I would like to see short articles in grotto newsletters seeking caves for WVCC to acquire—by donation, lease, purchase, or by conservation easement. An article of this sort is in the current issue of the West Virginia Highlands Conservancy, Highlands Voice, with a circulation of over 5,000 (I’ve already gotten a call). I believe cave acquisition is the main reason WVCC was formed—to keep caves open (or protected if necessary). This will be my primary effort—at least for now.

Pauline Apling has our membership records in great shape and Bob Hoke, Treasurer, has our finances in order. Most of our funds are in money market interest-drawing accounts and Bob has developed a budget. We very much appreciate the help given to us by various grottos and Institutional members, and individuals who have contributed time, talents, and money. Please keep it up.

There will be more changes to come—both from me and from anyone else who cares to help. There will be more changes to come—both from me and from anyone else who cares to share their thoughts. The Cave Scout idea will take many volunteers—there are 19 cave counties in West Virginia. Some of these counties have only a few caves and can be combined with others. But still, for it to work, we’ll need at least 15 warm bodies. If you’re willing to help, please call me (304-497-5000) or e-mail me ghrbrat@mtelos.net.

TIP—For all those who don’t already know—don’t throw away old charcoal lighters when the butane is used up. The piezo spark is all that’s needed to light a gas

Save the Date!!

Annual WVCC Banquet
November 10, 2007
Put it on your calendars now!! The Annual WVCC Banquet is scheduled for November 10, 2007! This year we’ll be celebrating the WVCC’s 10th anniversary!! We also are having the banquet at a new (to us) facility in downtown Lewisburg that is sure to allow us to try some new ideas in order to make this one of the most memorable banquets yet!

So put this date aside and plan to join us at the Greenbrier Valley Theatre in downtown Lewisburg on November 10 at around 6 p.m. for another great banquet. Registration for the banquet will be available starting at OTR this year. There will be a limited number of seats available, so be sure to register early while you’re at OTR!!
WVCC Membership Update  
By Pauline Apling

The Conservancy currently owns or manages seven caves in West Virginia and one in Virginia. Although there are no properties currently being acquired, there are a number of possibilities being investigated. Your continued support will help pay for WVCC’s routine operating expenses and future acquisitions.

<p>| 84  | Regular |
| 21  | Family  |
| 10  | Institutional |
| 4   | Sustaining |
| 73  | Life |</p>
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The Inevitability of Change  
By Jeff Bray

As you may have heard, at the April 2007 meeting of the directors of the West Virginia Cave Conservancy, I lived up to my promise of giving someone else the opportunity to be the new face of our great organization. I have resigned as the WVCC president, after at least five years of serving as the president. I remain on the Board of Directors and will continue to serve our membership as well as our cause. But it was time for a little change.

Change is always good for an organization as well as for the individual. An organization can grow stale if the leadership doesn’t get fresh ideas. That doesn’t mean that it has to have complete changes (longevity is a very important thing in an organization like the WVCC, which has much greater assets than the average grotto). Even if change seems to not be the best idea at the time, if given a fair chance, it will prove to be beneficial in some way for the organization. WVCC always benefits from change. Every time we welcome a new director, we get reinvigorated with new ideas and enthusiasm. Every time a new caver comes by our booth at OTR, that new caver’s spark of excitement can be transferred to those hanging out at the booth. Change gives the organization an extra lift that it needs to do—something that is admittedly a very difficult and time-consuming job—while never losing sight of what it is that the organization is here to do.

For me, change was also inevitable. I have found over the past year or so that I miss being the project caver that I used to be. Being president of an organization (and of a home-based company that deals with similar issues) that not only has to have a positive bias within our own caving community, but also has to be a positive influence in our overall communities as well, can keep a volunteer very, very busy, not to mention having to make a living along with all the other aspects of life as well. It would be easy to say that burnout was the reason for my departure from office, but after more thought, that really isn’t true as much as it is missing that connection that really is what brought me to cave conservation—and that is cave exploration. I am looking for a way to find the time to not only get back to an aspect of caving that I really have missed over the past few years, but since there has been quite a bit of change for me lately, I want to rebalance everything I’m involved in so that I can have that time to again hang out with the many friends I have in caving, doing the fun things we all enjoy about this pastime. Of course, I have some other motives as well that I’m sure will become evident over the next few years also, but for now, it was simply time to put my emphasis on other aspects and give others a chance to show their skills as the face of this fine organization.

Again, this doesn’t mean that I am disappearing. You’ll still see me spending much of my OTR at the WVCC booth this year. You’ll still see me attending every WVCC meeting I am able to make, and you’ll still hear me encouraging, politicking for a cause I believe in, putting down storm drain markers, and helping to organize workshops and conferences. But I’ll be doing other things as well, and doing more of the other things for a little while. I know some of you have found that I have been a good “highway” for your comments to get back to the WVCC Board. I encourage all of you to continue to comment, but please make your thoughts known to the whole Board. One hurdle I’ve had as president was relaying information to a Board that has some members who are unable to attend many social caving events. The whole Board needs your input! And it needs to come from the membership, whether it be from our Web site, talking to Board members at the booth or banquet, or simply sending our Board a message. Please feel free to talk to all of us on the Board and tell us what’s on your mind, and maybe we can help out. We wouldn’t have been able to acquire or manage some of our properties if it weren’t for our membership informing us. So please keep doing this through your volunteering efforts as well as through standard communication. As we enter a new era for the WVCC, I’m sure we’ll all notice some changes as well as many things staying constant. Let’s all roll with those changes and try some new ideas, but let’s not forget why this organization is here and what has made it so strong—great people, great projects, and great cooperation, not only locally and within our community, but nationwide, and even worldwide to some extent! Let’s continue to support cave conservation and find more ways in which we can give back to something we all enjoy so much!
WVCC No Longer Accepts Credit Cards
By Bob Hoke
WVCC Treasurer

Effective immediately, the Conservancy will no longer be accepting credit cards for membership payments, donations, or anything else. The monthly cost of supporting credit card transactions, even if no transactions occur, has increased to the point that the fees can no longer be justified. In addition, the Conservancy must pay 3% percent of the value of each transaction.

The Conservancy will, of course, continue to accept checks, money orders, and cash for memberships, donations, and all other purposes. We apologize if this change inconveniences any members, but the WVCC Board feels that elimination of credit cards will allow more income to be used for cave conservation instead of increasing the wealth of the credit card companies.

Maxwelton Sink Cave Project Continuing....
By Jeff Bray
Maxwelton Sink Cave Property Manager

Maxwelton Sink Cave is a leased property managed by the WVCC in Greenbrier County, West Virginia. The much-publicized dig took several years to complete. The reward has been worth it since the cave has been re-entered and is being resurveyed. Currently, the project, which usually has trips on a monthly basis, has remapped 9.3 miles of cave since the cave was re-opened. According to the original map from the 1970s, there are 10.6 miles of mapped cave, which means we are close to breaking above the known mapped extent of the cave soon.

Thanks to all those mapping and especially still the diggers for the many days of hard work to open the cave, as well as the owner of the cave for giving us all this opportunity!

Work is expected to continue on the entrance area periodically over time.

Island Ford Cave Update
By Alex Sproul
Island Ford Cave Property Manager

The Eastern Region, NCRC [National Cave Rescue Commission] has been granted permission to use Island Ford Cave in conjunction with the National Weeklong Cave Rescue Operations and Management Seminar, June 16-23, 2007, being held in Salem, Virginia. This might be a good weekend for others NOT to visit IFC.

Mary Sue Socky reports that a 250-pound woman (a surprise participant on MS’s recent cave trip) made it all the way back to the pool in IFC... and has vowed never to do so again.

Lightners Cave Update
By Meredith Hall Johnson
Lightners Property Manager

As you may have read in Bob Hundley’s “New President’s Message,” he appointed me to take the place of former Lightners Property Manager, Tim Brown. I have walked the property once, a year or so ago when we put up some new flyers on the information kiosk at the parking area. I plan to walk the property again when I’m down that way for the July WVCC Board meeting. So far, I do not have any news. Just thought I would introduce myself.

As far as I know, nothing has changed with regard to the status of the Lightners Entrance to McClungs Cave. (The McClungs Cave Entrance is still closed!) The entrance is vertical and you need to be vertically competent to enter the cave. Park in the parking area, which is pretty obvious. This property is right in the middle of a growing residential area, so be discreet and courteous to our neighbors.

WVCC agreed to put a changing area on the Lightners property. We have most of the material; we just need a suitable weekend and a crew of volunteers. I will post volunteer requests on caver lists throughout the Virginia Region when we figure out details.
Have you always wanted to own a piece of land in Greenbrier County, West Virginia, with a cave on it? Silly question! Rumor has it that some of the most warped of cavers have gone to such extremes as arranging lifestyles, jobs, and marriages to achieve this holy grail. So, there's still hope for you. Brants Cave is for sale!

Brants Cave is a “Davies Cave” located just north of Lewisburg, West Virginia. If you drive out of downtown Lewisburg on Court Street/Fairview Road just a quarter mile or so past the side road to Lost World, Brants Cave is out in a field a few hundred yards on your right. This field is currently becoming Greenbrier County’s latest “box-farm.” In so many words, this means that Brants Cave entrance is located on Lot #15 in “The Pinacle.” Therein lies the point.

Brants Cave is known for its pretty formations, but it’s a short cave—only a little over 700 feet in length. Ok—for you Northeastern cavers—it’s a GIGANTIC cave with OVER 700 feet of passage! The asking price for Lot #15 is in the S50-60K range. There are the usual covenants and annual homeowner’s fees. The West Virginia Cave Conservancy Board decided that the Conservancy could not afford to purchase this particular cave at that particular price. However, we would love to see a caver acquire and protect this cave, so we’re trying to get the word out.

If you might be interested in Lot #15, contact Marie Goodwin at Stuart & Watts Real Estate in Lewisburg, West Virginia. The telephone number is 304-645-1242. There’s hardly anything more satisfying than sitting on your back deck and sucking on a brew while looking out over your very own sinkhole with a cave that you just finished a fun trip into. However, let’s say that, just by chance, you are not interested in buying a retirement lot in Greenbrier County. Fool! But one of your caving buddies might be. Please pass along this information. After all, there’s hardly anything more satisfying than sitting on your friend’s back deck while sucking down one of their beers while looking out over their sinkhole with a cave entrance that you just finished a fun trip into!

Now for some disclaimers. The author of this article is not a licensed agent and this article is not an offer to sell any real estate but is provided only for informational purposes. The information in this article is not warranted, either expressed or implied, to be accurate and is subject to change without notice. As far as is known, only the entrance to Brants Cave and a small but unknown amount of the total passage is actually on or under Lot #15. Tax, title, and tags extra. The entrance is a vertical shaft approximately 20 feet deep—proceed at your own risk. Interest rates and fees subject to change but can only go as high as they think they can get away with. The view to the east of Lot #15 is currently beautiful, Greenbrier County karst, but will eventually be filled with boxes similar to yours. If you bring home at least $300 a week, your credit application will be taken—guaranteed. Not available in all states. Money talks—nobody walks.
Rapps Cave Gate
By Bob Handley
Rapps Property Manager

Rapps Cave was leased because of its archeological significance—ancient petroglyphs located very close to the entrance. Since the Rapps glyphs are the most northern-known example of this form of cave art, the archeologists (Dr. Kim McBride, University of Kentucky and Dr. Sarah Sherwood, University of Tennessee-Knoxville) advised more protection than was provided by the chain-link fence. The new gate is supported and anchored to the entrance walls and ceiling so as not to disturb or impede future archeological investigation. The gate concept and design had to be approved by the land owners, the lead archeologists, the State Historic Preservation Office (West Virginia Department of Culture and History), and the West Virginia Cave Conservancy Board of Directors. Considerable time lapsed in getting these approvals. With the approvals in hand and with John Pearson’s generous help, the steel was ordered and delivered to the site just before Thanksgiving—before the fields got mushy due to winter freezing and thawing. Craig Hindman, our master cave gate builder, set January 20, 2007, as the build date. Actually, with the exception of a few cold snaps in December, the weather was unusually warm until January 19th when it finally turned cold.

Response to the short article in the winter edition of the Region Record (and other communications) was astonishing—41 people either e-mailed or called to say they wanted to participate. The 33 who made it were: Don Anderson, Jay and Melanie Balakirsky, Pete Bracken, Robin Brikey, Ivan Cales, Tony Canike, Anya Crane, Vony Droms, Ellie Florance, John Fox, J. C. Fisher, Judy Fisher, Vic Garg, Paul Haggard, Bob Handley, Craig Hindman, Mike Kistler, Josh Lepman., Mark Manor, Carolyn McCain, Greg McCoy, Mark Minton, Kevin Mulligan, Twila Neeld, Scott Olson, John Pearson, Carl Pierce, Lauren Rexford, Carol Tideman, Janet Tinkham, Chuck Waller, and Harry Sowers (I’m terribly sorry if I’ve left anyone out who showed up). They came, starting Thursday, January 18th, even with a major snow storm forecast for the area. Not much will stop a determined caver!

Some were quite worried when Craig and Carol didn’t show up at the job site at 9 a.m. on Friday morning. They finally came in much later in the morning after a wrong turn gave them an extended “tourist” trip into Pocahontas snow country, pulling a loaded trailer. The area inside the fence was cleared of weeds, grapevines, blackberries, rose bushes, and autumn olive with a big weed eater (it was a jungle). Craig was the Chief Welder with Kevin Mulligan and Scott Olson as the primary welding assistants (there were many other welders available). These guys unloaded and set up the welding equipment at the cave and at the steel drop-site 300 feet away. The first piece of steel was the heaviest one (392 pounds)—a 6-inch by 6-inch by ½-inch angle 20 feet long. It was the base plate and it took eight people to carry it to the cave. A few of the vertical angles were cut and welded in place before darkness set in on Friday. Craig’s work lights extended the working time a little.

Saturday morning dawned clear and cold—about 20 degrees F, but we had a full crew on hand on the windy hilltop at 9 a.m., ready to work. The morning was very busy with the gate construction, setting up John Pearson’s large shelter, tables, chairs, and then preparation for a hot lunch. For a
while there were three generators running to supply electricity for all the activity.

As the need for numbers of people slacked off in the afternoon, trips were made into the entrance area to view the petroglyphs, the prismatic joints, and other features of the room. Later, Vonny Drons led a trip deep into the cave to see the large dome pit in the neat walking passage and also the white formations near the present end of the main cave. Those on this trip were Vonny, Anya Crane, Jay Balakirsky, Greg McCoy, Carl Pierce, Mark Minton, and one other I don't have a name for—sorry.

Twenty-one hundred pounds of steel now reside in the cave entrance providing very effective protection for the cave. One-inch-diameter steel bars were driven into holes drilled into the entrance walls and ceiling. The entire gate structure was welded into these bars. The entrance floor was not disturbed. The chain-link fence, with its locked gate, will remain in place. A total of approximately 170 hours of work went into the project this weekend. It was paid for with a generous grant from the Cave Conservancy (if the Virginias and also a generous donation from the lead archeologists. Kudos to WVACS for the use of their Field Station. All this help made the gating of Rapps Cave possible.

To wrap it up—The cave gate was locked; all the welding equipment was packed up and loaded; Pearson's shelter was taken down; tables, chairs, food service articles, cords, etc. were all loaded and carried off. Even the porta-potty that Pearson had arranged for at the Buckeye Road parking area was silent.

Sunday morning, in the midst of a snow storm, Craig Hindman, John Pearson, Mark Minton, Ellie Florance, and Vic Garg went back to the steel drop-site to load and move the leftover steel to John's barn.

WVCC wishes a very big THANK YOU to all who braved the cold, windy weather on Friday and Saturday and then the snow going home Sunday. Everyone reportedly made it home safely. A great weekend.

Although Rapps Cave will remain fenced and gated to protect its historic significance, it can be open (with prior arrangements) to scientists and serious cave exploration, mapping, and an occasional special trip. Those who enter are expected to abide by the following rules:

1. No camping or fires will be permitted at any time.
2. All trash and human waste must be packed out.
3. Collection of rocks, flora, fauna, etc. on the surface or in the cave must be done in accordance with West Virginia laws, which require a permit(s) from the state—based in part on permission from the Board. The Board and the property owners may approve such requests on an individual basis based on scientific need.
4. The placement of permanent climbing anchors is not allowed. Minimum alteration of cave passages may be allowed with the consent of the Property Manager and the cave owners. The chain-link fence and entrance gate are to be maintained to prevent unapproved access to the cave.
5. Access on foot will follow a path from Buckeye Creek Road as designated by the Property Manager. Vehicle access to the cave area may be allowed (by the Property Manager) to carry project equipment and/or materials to the cave entrance area. Travel is to be restricted to a specific route across the fields from Buckeye Creek Road. If the fields are leased to a local farmer, the farmer also must be contacted for permission to cross the fields with a vehicle.
6. No commercial activity, including caving-for-pay, will be allowed. No permanent structures are allowed.
7. All persons who enter the cave must sign a Liability Release, which will be kept on record. The leader of each cave trip must contact the Property Manager (at least seven days in advance of the trip) who will keep a record of all those entering the cave, the trip date, and the purpose of the trip.
8. All persons who enter the cave will comply with these rules set forth by the WVCC Board, NSS Conservation Policy, NSS safety and techniques recommendations, and all applicable state and Federal laws.
Rapps Cave Gate Personnel

Editor's Note: As best as folks remembered a few days after the event, this is as full a list of participants as is known. If you were at the Rapps Cave Gat, an and your name is not listed here, sorry. Please send an e-mail to the editor.

- Don Anderson
- Jay Balakirsky
- Melanie Balakirsky
- Pete Bracken
- Robin Bratney
- Ivan Cales
- Tony Canike
- Anya Crane
- Vynny Drons
- J.C. Fisher
- Judy Fisher
- Ellie Floranee
- John Fox
- Vik Garg
- Paul Haggert
- Bob Handley
- Craig Hindman
- Mike Kistler
- Josh Lepman
- Mark Manor
- Carolyn McCain
- Greg McCoy
- Mark Minton
- Kevin Mulligan
- Twila Neeld
- Scott Olson
- John Pearson
- Carl Pierce
- Lauren Rexford
- Harry Sowers
- Carol Tiderman
- Janet Tinkham
- Chuck Waller

Craig Hindman puts the finishing touches on the completed Rapps Cave gate, while Kevin Mulligan cuts metal and Scott Olson looks on. (Photograph by Yvonne Drons)
Rapps Cave Gating Project
By Buddy Lane

John Pearson and I arrived at his house in Renick around 11:30 p.m., just in time to greet Carol Tiderman and Craig Hindman. The four of us commenced to discuss what we wanted to accomplish on Friday. In the meantime, Bob Handley got the facilities at WVACS opened and ready for the others who would be arriving later that night. After talking until 1 or 2 in the morning, we all hit the hay. Vik Garg arrived at John’s house at 6 a.m. Friday morning, greeted by Craig with coffee. It was Craig’s intention to meet Anya Crane and Kevin Mulligan, along with Scott Olson up at WVACS around 9 a.m..

While John and I were running errands, Craig decided that WVACS was north of Renick. The proverbial look a right instead of taking a left. With trailer in tow, Carol and Craig took a tour into a Pocahontas County winter wonderland. When Carol spotted a Randolph County sign, Craig conceded and turned around. With the two of them very overdue, Anya and Kevin drove from WVACS into Lewisburg to the local hospital to make sure that everyone was okay. This was due to spotty cell phone coverage in northern Greenbrier County.

Anya and Kevin, joined by Scott, then proceeded to John’s house looking for our missing Waldos. Along with Vik, we all proceeded to the cave to see if Carol and Craig were there. Of the group of us, only John knew precisely where the cave was.

Scott, Vik, John, and I then restacked all the steel onto landscaping timbers. John and Bob had been trying to get that done for a couple of weeks, but their schedules never synced up. Some of the steel was frozen to the ground, so we used some pry bars to loosen them up. This was my first encounter with a 20-foot-long piece of 6-inch angle iron.

Oh, for some background. John told me that the temperature for the last five weekends had been between 53 and 60 degrees F. It never got over 35 degrees either day we were working, with winds ranging 18 to 28 MPH.

Snippets on Rapps Cave Gating
By John E. Pearson

This excellent project should be credited to Bob Handley and Craig Hindman. They did an excellent job getting this done in 30-35 degree weather with winds gusting from 16 to 28 MPH depending on the time of day. I am proud to have been able to be a part of this project.

Vik Garg drove 7 hours to set up his canopy for shelter. Ellie Florance, Vik, and I made the meals we served to everyone, but there was a lot of food brought by people that I can’t recognize because I didn’t see who brought what.

There were at least four or five people with welding experience. Scott Olson, Craig Hindman, Mark Manor, Mark Minton, Pete Bracken, Kevin Mulligan, and Greg McCoy either welded or cut steel with a torch, and there’s a real good possibility that I left someone off that list.

Want some tidbits? Ten of us worked on Friday setting the 20-foot-long piece of 6-inch angle iron and the cross braces. All that is in addition to setting up camp to make the volunteers comfortable. On Saturday, we had 31 workers. On Sunday, we had eight people help with the removal of the extra steel and cleanup of the site in a driving snow storm. I estimate 375 hours of volunteer time were put in, excluding travel time. Not knowing everyone’s affiliation, there was a large number of people from Baltimore/Frederick/Sligo Grottos; as well as 10 members, including the entire management staff, from Bubble Cave/Front Royal Grotto; and lots of New River Valley Grotto people. There were at least 15 people I do not know where they were from, but most of them came in response to the Region Record article.

Best story was Craig going to WVACS to pick up Kevin. He look a right and ended up driving 50-60 miles through Pocahontas.
County to the Randolph County line through a snow storm before he admitted he might of gone the wrong way. Anya and Kevin even drove into town and checked the local hospital to make sure that they weren't in an accident or something. Everyone finally met at my house around 11:30 looking for Craig and Carol. Some of us went to the cave to see if they were there, so while we were waiting for their arrival, Scott, Vik, and I got all the steel up off the ground onto some landscaping timbers.

Thank you, Bob, for a job well done.

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**Thoughts on Cave Gating**

By Craig Hindman

Gates are installed for a number of reasons. The first reason is to control access. The second is to protect the resource. The third is to limit liability.

In terms of a gate, it keeps the honest person honest, and for the not-so-honest, it serves as a deterrent. They are the same as locks on your house or passwords on your computer.

Gates have come a long way. They have been modified from the simple closer of a solid door in the early 1800s to the grid patterns of today's bat-friendly gates. There are books written about the different options of gates and the designs. Without going into the pros and cons of each style, there are many things that have a bearing on style.

What are you trying to protect? Birds, bats, aquatic life, or people and artifacts. Each will require a modification to the style.

Things to be concerned about in the design:
- Remoteness of site
- Distance equipment and material have to be carried (by hand)
- How much can be prefabricated
- Number of volunteers needed to perform these tasks
- Number of skilled laborers needed
- Placement and location of gate
- Once gate has been installed, it will need to be monitored. How often will checks be

preformed, and by whom
- And long-term repairs if needed

You cannot install a gate without making some change to the environment. Air flow, water flow, and movement through the gate. The last of movement, is the main concern to slow something to half speed to negotiate a gate. You have made it easy for predators to hunt, like snakes, raccoons, and skunks.

So keep this in mind, before you design the spider web that looks good, but slows movement to a crawl to go through the opening.

Cost of most gates can be figured at about $25 per square foot of opening covered for material with volunteer labor and donated equipment.

If you contract the building of the gate, the cost could rise to $50 per square foot of opening covered for material and non-volunteer labor at about $75 to $100 per man-hour. Add in any special equipment fees.

Some conservation organizations have tapped into this by charging a fee to install a gate, with the funds going to the organization.

Cost of most gates can be figured at about $25 per square foot of opening covered for material with volunteer labor and donated equipment.

It's cheaper to gate mines than to do all the required surveys.

This has led to trying to come up with a prefabricated gate that can be placed and backfilled around it. This could help cut costs involved in design and installation of individual gates.

It is best not to have to put in a gate. But if you have to install a gate, install the strongest and best gate you can. If the resource is worth protecting, there should not be any weak link in the gate.