

IKC UPDATE

A Quarterly Publication of the Indiana Karst Conservancy

December 2010

Number 99



INDIANA KARST CONSERVANCY, INC

PO Box 2401, Indianapolis, IN 46206-2401

ikc.caves.org

Affiliated with the National Speleological Society



The Indiana Karst Conservancy is a non-profit organization dedicated to the conservation and preservation of caves and karst features in Indiana and other areas of the world. The Conservancy encourages research and promotes education related to karst and its proper, environmentally compatible use.

EXECUTIVE BOARD

President
Jerry Lewis (2011)
(812) 967-7592
LewisBioConsult@aol.com

Secretary
James Adams (2011)
(317) 518-8410
JKAdams@aol.com

Treasurer
Keith Dunlap (2011)
(317) 882-5420
Keith.Dunlap@juno.com

Directors
Bruce Bowman (2011)
(317) 539-2753
Bruce.Bowman@tds.net

Dave Haun (2012)
(317) 517-0795
DEHcave@onet.net

Don Ingle (2013)
(812) 249-6985
D.Ingle5705@comcast.net

Everett Pulliam (2013)
(317) 745-7816
SpeleoRat@aol.com

Bob Sergesketter (2011)
(812) 482-5517

Bruce Silvers (2012)
(260) 416-4197
BruceSilvers@verizon.net

Karen Silvers (2012)
(260) 249-0924
BentBat@hotmail.com

Tom Sollman (2012)
(812) 753-4953
Sollman@juno.com

Carla Striegel-Winner (2013)
(812) 367-1602
CarlaStriegel@gmail.com

Bob Vandeventer (2011)
(317) 888-4501
VandeventerBob@netzero.net

Richard Vernier (2011)
(812) 385-5058
rsav1@juno.com

Jamie Winner (2013)
(812) 367-1602
JAWinner@gmail.com

COMMITTEES / CHAIRPERSON

Education/Outreach
Don Ingle
(see E-Board list)

Web Technologies
Bruce Bowman
(see E-Board list)

IKC Update Editor/Publisher
Keith Dunlap
(see E-Board list)

Hoosier National Forest
Steve Lockwood
(see E-board list)

Buddha Property Manager
George Cesnik
(812) 339-2143
GeoCesnik@yahoo.com

Orangeville Rise Property Manager
Steve Lockwood
(see E-board list)

Robinson Ladder Property Manager
John Benton
(812) 389-2248
JBenton@fullnet.com

Sullivan Property Manager
Keith Dunlap
(see E-Board list)

Wayne Property Manager
Robert Sollman
(812) 753-4953
RSollman@butler.edu

Indian Creek CE Monitor
Jerry Lewis
(see E-board list)

GROTTOES & LIAISONS

Bloomington Indiana Grotto*
Dave Everton
(812) 824-4380

Central Indiana Grotto*
Keith Dunlap
(317) 882-5420

Dayton Underground Grotto
Mike Hood
(937) 252-2978

Eastern Indiana Grotto
Brian Leavell
(765) 552-7619

Evansville Metro Grotto*
Ernie Payne
(812) 477-7043

Harrison-Crawford Grotto
Dave Black
(812) 951-3886

Near Normal Grotto*
Ralph Sawyer
(309) 822-0109

Northern Indiana Grotto*
Jennifer Pelter
(260) 456-3374

St Joseph Valley Grotto*
Mark Kraus
(574) 295-6673

Sub-Urban Chicago Grotto
Gary Gibula
(630) 393-6746

Western Indiana Grotto*
Doug Hanna
(812) 208-4609

Windy City Grotto
Jack Wood
(773) 728-9773

*grottos with liaison agreements

MANAGED CAVES / PATRONS

Buddha Cave
Jeff Cody
(317) 888-9898
codyjpme@att.net

Lost River Cave
Dave Tibbets
(574) 875-8498
DaveTibbets@gmail.com

Robinson Ladder Cave
John Benton
(812) 389-2248
JBenton@fullnet.com

Shiloh Cave
James Adams
(317) 518-8410
JKAdams@aol.com

Suicide Cave
Ronnie Burns
(812) 883-7400
RonLiz1998@gmail.com

Sullivan Cave
Bob Vandeventer
(see E-Board list)

Wayne Cave
Dave Everton
(812) 824-4380
DEverton@indiana.edu

Cover: John Benton, Gary Roberson, Richard Newton, and George Jaegers in the Eerie Canal, Blowing Hole, Harrison County, Indiana. Photo by Dave Everton © 2010.



IKC QUARTERLY MEETING REMINDER
SATURDAY, DECEMBER 4th, 10:00 AM EST
BLOOMINGTON, INDIANA
IU GEOLOGY BUILDING, ROOM 143

The quarterly meetings are for the elected Board to conduct business and for our members and other interested persons to have an open forum to talk about caves and karst conservation and related topics. Past, present, and future IKC projects are discussed to solicit comments and input from our members and the caving community as a whole. The meetings are informal, and everyone is encouraged to attend and participate. The IKC Board wants your input.

Preliminary Agenda Items: Indian Creek Conservation Easement update; Land acquisition activities; Wayne Cave Property/I-69 Conservation Easement forest mitigation discussion; I-69 Draft Environmental Impact Statement comments; White-nose Syndrome update; Financial reports; March elections planning; and more....

Meeting directions: The Geology Building is located at 10th and Walnut Grove. Tenth Street runs east/west and is one of the major streets that run across the IU campus. Park behind the building, parking permits are not enforced on weekends. Enter the building from the rear at the west end. The room is halfway down the hall on the right.

ACTIVITIES CALENDAR

Dec 04 – IKC Quarterly meeting (see above)

Dec 04 – Work afternoon at the Sullivan Property (see page 7)

Feb ?? – IKC Board meeting (tentative)

Mar?? – IKC Annual Business meeting (date & location to be determined)

For more information on the Indiana Karst Conservancy, visit our website at ikc.caves.org or write to our PO box. Membership to the IKC is open to anyone or any organization interested in supporting cave and karst conservation. Annual dues are \$15. Please see inside the back cover for a membership application form or to make a much-appreciated donation. Donations can also be made by credit card using the donation button located on our website's home page.

The *IKC Update*, distributed for free, is published quarterly for members and other interested parties. The purpose of this newsletter is to keep the membership and caving community informed of IKC activities and other news related to cave/karst conservation. Submission of original or reprinted articles for publication is encouraged.

IKC Update (ISSN 1076-3120) copyright © 2010 by the Indiana Karst Conservancy, Inc. Excluding reprinted material and individually copyrighted articles and artwork, permission is granted to National Speleological Society affiliated organizations to reprint material from this publication, with proper credit given to the author/artist and the *IKC Update*. Articles do not necessarily represent the opinions of the Indiana Karst Conservancy, the National Speleological Society, or their respective members.

RAMBLINGS FROM THE PRESIDENT...

These are exciting times for caving in Indiana. Unless you've been living in a cave, you're probably at least aware that mapping has been going on in Blowing Hole and Binkley Cave (south of Corydon in Harrison County). And this hasn't been just a little bit of mapping.

In 2009 Gary Roberson published the book *Fifty Years Under the Sinkhole Plain: The story of Binkleys Cave and the Indiana Speleological Survey*. Gary wanted to document the exploration of Binkley, Indiana's longest cave, while hoping to inspire others to pick up the baton and run with it. It would be an understatement to say that he achieved his goals. The book contains over 400 pages of text and photos, and is richly detailed in both description of the passages as well as the personalities of those who discovered them. How many times has valuable information been lost because no one took the time to write it down? The book is a treasure trove of information about Binkley and I for one salute Gary in putting in the immense amount of time and effort to compile all the bits and pieces into a sensible volume.

In many places the book talks about places where the survey stopped, but the passage continued. Gary's hope was that all of these leads would be too tempting to ignore. I suspect that there was some degree of bait and switch when Gary enlisted Dave Everton to take photos for the book. Dave took the bait (hook, line, and sinker).

Since that time, the "terminal" breakdown in Blowing Hole has been penetrated and the length of that cave has grown from 1.85 miles to now over six miles. Known to be hydrologically connected to Miller Cave by a dye-trace, on page 121 of the book there is an interesting topographic map showing the underlying caves passages. It shows the passages known at the time in Blowing Hole and the much smaller Miller Cave, with over a mile separating the two. Now the map of Blowing extends past Miller Cave and I suspect the lat-

ter will eventually become an upstream entrance to the system.

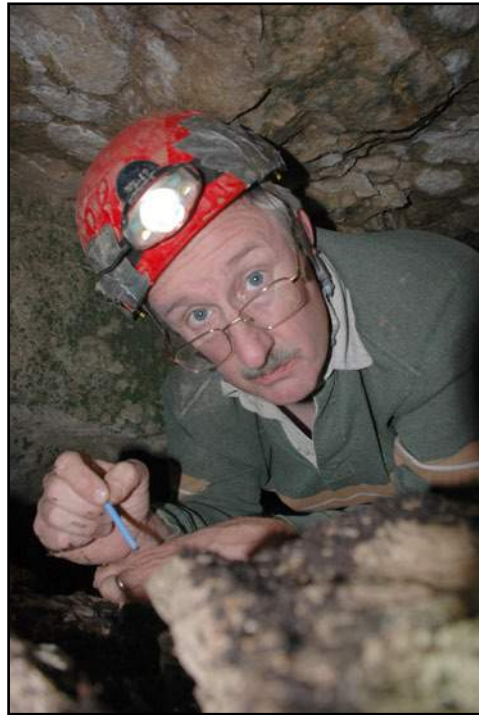
But this gets even better. Much work has also been happening in the Strike Section of Binkley Cave. The main passage of the Strike Section, the most southerly part of Binkley, extends roughly parallel to the stream passage in Blowing. It was thought that if a Binkley/Blowing connection could ever be accomplished, it would be through the discovery of an upper level passage traversing the ridge between the two caves.

That passage has now been discovered and at the time of this writing the map of Binkley now extends across the map of Blowing. The likelihood for connection appears promising. Already the longest cave in Indiana, this would push Binkley to over 30 miles and into the company of other world-class caves.

Many persons have been involved in the exploration and mapping of these exciting finds and I don't want to steal their thunder in telling

any more of the story. Dave Everton has carefully documented reports of his and many other cavers' trips. He sends out a progress report and map links with each new survey trip, so there is already a wealth of information about the exploration for anyone who wants it. Dave encourages anyone interested to contact him directly or visit the project website: <http://mypage.iu.edu/~deverton/Binkley/binkley.htm>.

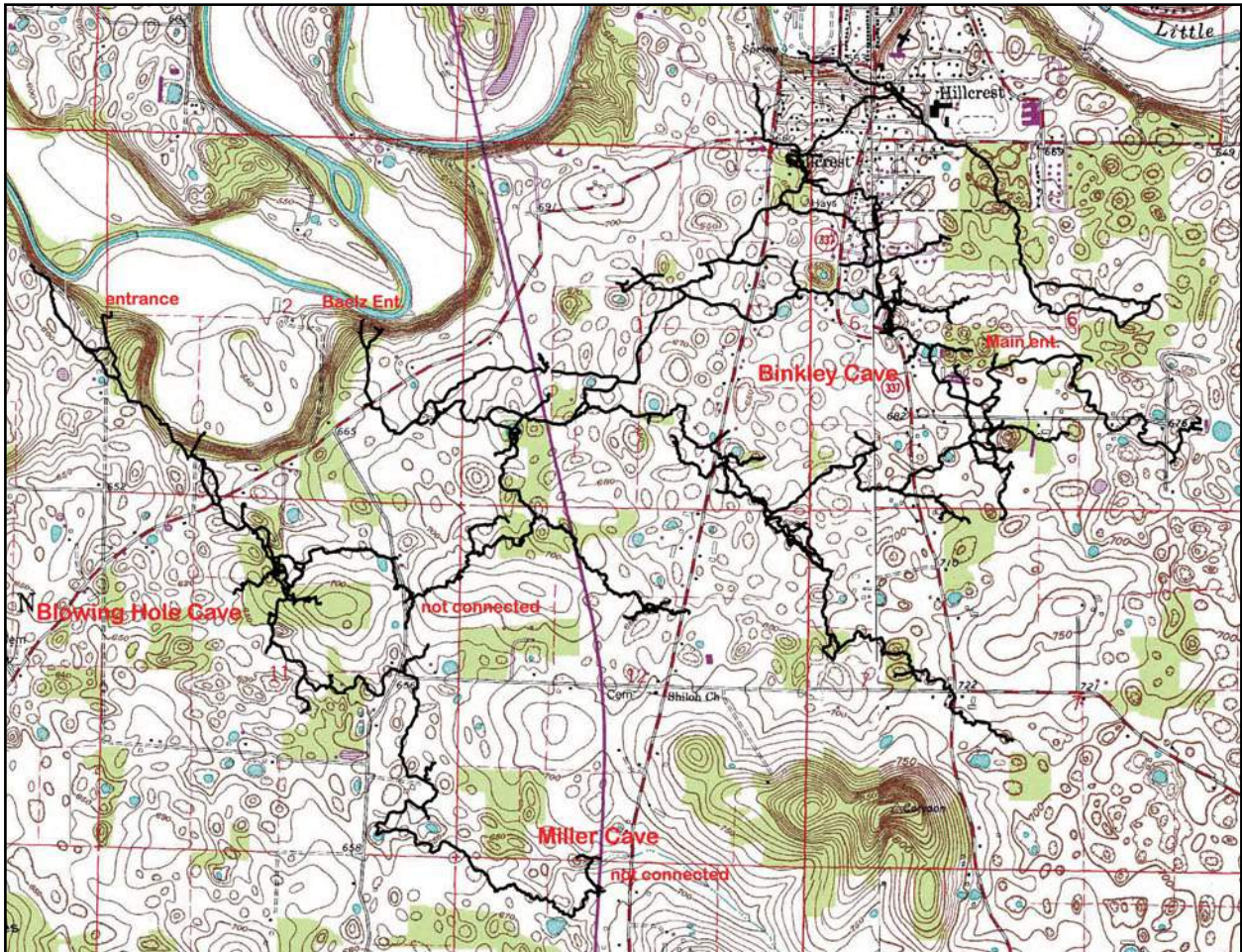
I have a couple of points that I wanted to make. First, if you want to go caving, here is an example of the discovery of over five miles of virgin passages that have been mapped in the recent past, right here in southern Indiana. My other thought is a more philosophical... how does one even start to conserve this massive cave system? In addition to taking on the status of a mega-cave, the Binkley/Blowing system is a biological treasure. As the cave is explored, it extends under ever-greater areas of the surface. The ownership is to say the least a mosaic of fragments, with the cave extend-



ing under dozens if not hundreds of individually owned parcels of land. Part of the cave is under Corydon, while most of it lies under a landscape of farmland that is transitioning into suburbs. Septic pollution has already been documented. Likewise, there has been at least one recent gas well intersection due to the new interest in natural gas extraction from shale in the area. The potential

for growth of these and other problems is great. I'm also concerned about long-term access... at the moment there are multiple entrances with friendly owners. As we all know that can change in an instant, so that's another issue to think about. I don't have any answers, but now seems like a good time to start thinking about the questions.

Jerry Lewis



NEWS BRIEFS...

- For the past year, the IKC has been discussing with Bernardin, Lochmueller & Associates (BLA) who represents InDOT, on the possibility of participating in the I-69 mitigation program. The “opportunity” would be to place a conservation easement on the 20-acre Wayne property in exchange for significant compensation (more than we paid for the property seven years ago). The funds could then be used for future acquisitions. In October, the IKC received a formal offer along with the conservation easement document which outlines the restrictions that would be placed on the property, along with those rights retained by the IKC going forward. As with most conservation easements, there would be a prohibition on any sort of development. In addition, the easement would prevent any future timbering on the property, which means giving up the primary means of a sustainable revenue for the organization. The current Board will have to weigh monetizing the property in the short-term compared to potential future revenue (assuming future Boards would consider selective cutting). In addition to the timber prohibition, there are other terms in the initial agreement that are fundamentally objectionable and will need to be changed if the Board is to consider accepting



the easement on all or part of the property. We have started a negotiation dialogue with BLA and InDOT, but at this point we do not know what the final agreement will look like. The IKC Board would really like to get feedback from the membership on this proposal and this subject will be a major agenda item at the December meeting for those who would like to participate in the discussion and decision process.

- ❑ As was mentioned in the September *IKC Update*, the Draft Environmental Impact Statement for Section 4 of the I-69 interstate (southwest of Bloomington) was released on July 30th. Originally there was a 60-day comment period, but this was eventually extended to 90 days (the IKC was one of the organizations that requested an extension). The IKC submitted a four-page comment letter that focused two primary themes: 1) The lack of function and justification for the County Line interchange that was added for consideration after the Tier 1 Environmental Impact Statement/Record of Decision was made back in 2005. This interchange is very expensive, encourages indirect residential growth, has a dis-proportional impact to forest, businesses, and residential displacement, and does not provide any meaningful performance advantages compared to using the existing SR 45 when traveling to and from Bloomington. It also seems to go against a commitment InDOT made to USFWS during the Tier 1 formal consultation with that agency; and 2) The failure of InDOT to avoid karst features in the area south of Stanford by not considering alignments outside of the prescribed Tier 1 corridor, even though they had authority to do so. As such, InDOT violated the spirit of the 1993 Karst MOU which was supposed to be the cornerstone of building highways through Indiana karst areas. Rather than looking for broader alternative alignments that would lessen impacts, InDOT declared that the impacts to karst was simply *unavoidable* and thus decided to plow ahead. The IKC proposed a significantly different alignment that likely would reduce impact, shorten the highway by up to 1-1/2 miles, and save up to \$92 million in construction and users' costs. What was most disheartening was that InDOT spent a lot of time and effort to study and document the karst, yet in the end completely ignored much of the knowledge gained. In addition to comments submitted on behalf of the IKC, several other members submitted individual comments, including 27 pages submitted by Keith Dunlap. Dunlap's comments were more specific and mostly technical in nature, many questioning analysis methodologies, pointing out inconsistencies in the DEIS document, and in some cases, demonstrating logical and mathematical errors that could significantly change InDOT's justifications on some decisions.
- ❑ For the past few years, we have been promoting the use of the Internet search engine www.GoodSearch.com as an easy means of raising funds for the IKC. For every search conducted, approximately one cent is donated. GoodSearch also offers a merchant's portal where you can access a large list of on-line stores. By simply entering through the www.GoodShop.com website, purchases made on the sponsored sites will yield 0.5 to 5% of the purchase price for the IKC. If you do a lot of Internet shopping and remember to use GoodShop, the donations can add up quickly. The list of participating merchants grows daily and includes Amazon.com, Barnes&Noble, Best Buy, Buy.com, Dell, eBay, Home Depot, iTunes, J.Crew, Kohl's, Land's End, Macy, Office Depot, Old Navy, PetSmart, Sears, Staples, Target, Toys-R-Us, and Walmart. Since 2007, the IKC has earned nearly \$80. Just enter "IKC" when you select your charity and start searching and/or shopping.
- ❑ Each March the IKC holds their Board elections where the three Officers and four of the twelve Directors are selected by the membership. With the IKC having a board-centric structure, it is important that we have a Board that represents the membership and also candidates that have diverse views on what the IKC should be and do. Board members are also responsible for overseeing our current assets and being good stewards to the properties we own. If you are interested in becoming more involved with the IKC or think the IKC should be moving in a different direction, please contact Jerry Lewis by the end of January.
- ❑ The IKC has gained two new members since the last *IKC Update*. Welcome Wes Roeder (502) and Nick Benton (503). The IKC membership stands at 194.

GREEN HALLOWEEN

by Kriste Lindberg

On the evening of October 19, as folks were gearing up for Halloween, Bob Vandeventer and I descended upon The Venue, one of Bloomington's fine arts galleries. Our mission was to educate the public about cave and karst conservation through the arts.

The Venue had done a great job of promoting our "demo" in the local media and we were joined by a reporter and photographer from IU's Indiana Daily Student newspaper to help get the word out on the subject. An interesting cross-section – a mix of ages, backgrounds, interests – from the general public attended.

Bob and I discussed cave critters suitable for the upcoming holiday – bats, spiders, salamanders – while he demonstrated cave gear and I supplied watercolor materials.

All attendees received their own piece of watercolor paper (or in some cases, more than one) to paint their thoughts upon. The only rule was that the creation had to be of a cave or cave-related critter!

Now, some may think that art and the conservation of caves make strange bedfellows. That's not necessarily so. We are finding that they are really quite compatible. Science is more objective, whereas art is more subjective. The two can work well together and be complimentary, that is... if you let them.

If you follow the left brain/right brain theories, the left side is more logical and the right

is more creative so there you have it – a match that's almost meant to be, one helps to complete the other. When a person creates an image, such as a painting, they can develop an attachment to it, or form ownership, thus, creating a deeper bond with the subject. In this case, caves and creatures that live within them.

Once we have put more research into the project, we plan to package the "demos" for national

Continued on page 15 ►►



photo by Chet Strange, *Indiana Daily Student*

SULLIVAN PROPERTY TREE PRUNING WORK PROJECT

DECEMBER 4, 2010 – 2 PM

The Indiana Karst Conservancy is organizing a mini-workday after the IKC quarterly meeting in Bloomington. The primary activity for the afternoon will be to prune on the trees that were planted in the ridge top (south) field in 2001. The pruning will accomplish two things: 1) improve the quality of the trees by eliminating multiple trunks, and 2) facilitate future weed control spraying by removing low branches (and thus leaves). This is also an opportunity to wander the 28-acre property (most visitors never seen to get beyond the parking lot and cave). No special skills are required. Good foot-wear and gloves are recommended. If you have loppers, pruning shears, and/or bow saws, please bring them, but we will also have a stash of tools to loan.

The property is located approximately 1.3 miles west of SR 58 (Springville) on SR 54. Watch for Phillip Lane, heading to the north from SR 54. The access driveway to the Sullivan Cave Property is just to the west of Phillip Lane on the left. Take the driveway to the parking lot. Start time for the work activities is 2 PM EST, but volunteers can show up any time until 4 PM. For directions or question, contact Property Manager Keith Dunlap (Keith.Dunlap@juno.com or 317-882-5420).

EDUCATION AND OUTREACH COMMITTEE REPORT

by Don Ingle

The fourth annual Indiana Bat Festival was once again held at the Science Building on the campus of Indiana State University in Terre Haute on September 18. This year, we intensified the experience of the inflatable cave somewhat, as some newly made formations by Bob Vandeventer were available for the trip to the Festival, and I had brought some amplified speakers along which were busy pumping out cave water sounds to add to the subterranean atmosphere. So we had all the bells and whistles for this year's event in place, and its presence had prompted at least one kid to ask where the stream was in the cave. She had looked somewhat disappointed as I told her that there wasn't one. Maybe next year. I'm thinking maybe that is probably too (you should pardon the pun) immersive an experience. I am usually all about overkill, but that is probably one bridge too far, even for me. Still, the absence of running water might give her some impetus to seek out the real deal later in case she really wants to try on the cold and muddy bedraggled look for herself later in life.

We also had the IKC Display with all the requisite contact materials there, and the *Caves* video was also running on a laptop for those who were in need of eye candy where they were waiting for their children to exit the cave.

As usual, the Indiana State staff were wonderful hosts, providing a nice cart to haul in all the materials for the cave both going up and coming back. Many thanks to Laura Hohman for making this part of the experience considerably less grueling that it has been in the past. I was even offered the use of a loading dock that I hadn't known existed. I declined its use, but filed it away for future reference. I do so hate that slight uphill cobbled walkway up to the Science Building. It completely ruins any thought of a stealthy approach. Though quite helpful, the weight of a heavily laden cart makes your approach and departure sound like someone rhythmically banging a piece of sheet metal with a rubber tent peg mallet. Wham, wham, wham all the way up and back. Like the Hammer and Anvil Chorus without all that tedious musical accompaniment. Then repeating as needed for as many times as it takes. Sandwiches and drinks were also provided for the exhibitors, and were much appreciated. I availed myself of both. Yum.

Speakers during the event included John Whitaker, the Director for the Center for North American Bat Research and Conservation; Dale Sparks, a research scientist at ISU; Al Kurta with

Eastern Michigan University; Rob Mies with the Organization for Bat Conservation; and Tim Carter with Ball State University, who graced our inflatable cave once again with his presence. Dr Carter is a fellow after my own heart, who does not deem any experience too undignified to participate in for the amusement of children, particularly his own. I got a much better picture of him this year exiting the cave this time, and had even gotten him to pose for it. Smiling, even. Dr Whitaker's talk focused on the subject of white nose syndrome, I'm assuming. Or at least that's what the schedule said. I wouldn't know, though, really. I stayed with the cave... Someone has to.

After a 6 PM barbecue dinner at Dobbs Park, a Bat Science Night was part of the later festivities. During the night event, scientists demonstrated netting, radio-tagging, and echolocation of bats. This part I bailed on so as to spend the rest of the evening with my lovely wife. I include a mention of it so as to show just how very rich and varied the activities are that ISU puts on for this annual event.

We are already committed to appear for next years festival. Linda Hohman made sure we'd be there within one week of the conclusion of this year's event, saying that in her opinion, the inflatable cave is easily the most popular of all the children's activities. This I had always suspected, being at the center of the storm like I was and lacking perspective, but it is always nice to get some positive reinforcement.

Business at the cave was good, though I am learning from past mistakes, and only provided 8 lights for the kids to use, making a light in hand mandatory for entry. So even when it got at its peak, it was still quite manageable. I was right there at the entrance to make sure the environmental impact on our 37 feet of black landscaping plastic was minimized as much as possible, playing light cop and performing entrance maintenance as the afternoon wore on. Not that it required much. The kids were extraordinarily well-behaved this year and did not require very much enthusiasm dampening. *That* was a refreshing change of pace. Though we did have the occasional odd two or three or so who clothesline themselves on the way out of the cave. As usual, we were in the same place in the Science Building as last year, and though initially I did not care much for our inflatable cave's location in relation to the other exhibits in the past, I have to admit jamming it into a 50 foot side corridor towards the back of the main



area makes running the inflatable cave considerably easier to manage. The kids found us anyway (they always do), and probably made it easier on the other exhibitors as well. The adults have their own areas, and the vendors are right there in the glide path towards our spot. This was probably intentional. You think?

Thanks to the ISU staff, particularly Laura Hohman, without whose help I would have been a considerably less happy camper, and Brianne Walters, and also to John Whitaker, who always makes time to make sure I am taken care of in the middle of what must be a very hectic and challenging day for him. See you next year!

Festival celebrates bats for fourth year at ISU

TERRE HAUTE – Kelbie Thompson, a third-grade student at Dixie Bee Elementary, had never been to the Indiana Bat Festival before Saturday, but she had been interested in bats for a long time.

“Sometimes they fly over my house, and they look really pretty when they fly over the moon,” said Thompson, who had a similar scene painted on her face.

Thompson, in charge of the origami bat station at the Fourth Annual Indiana Bat Festival at Indiana State University, instructed people – mostly children – how to make origami bats from brightly colored squares of paper by following seven steps of folding.

The bat festival, hosted by ISU’s Center for North American Bat Research and Conservation, takes place at ISU with evening activities at Dobbs Park.

Thompson attended with Karen Moffett, a second-year ISU ecology doctoral student, who is studying small mammals, reptiles and amphibians. This list includes bats.

Moffett was working at Dobbs Park when the first bat festival took place in Terre Haute, so she has been helping with the bat festival for four years.

Her favorite part of the bat festival is the demonstrations at Dobbs Park, which take place in the evening when the bats are flying.

“When they’re out over the water, it’s like gunfire. It’s rapid like machine guns because they’re clicking. That’s how they hunt,” Moffett said.

Bats use echolocation, send-

ing signals away from them and gathering information about their surroundings when the sounds bounce back. Festival attendees listened to the bats with the Anabat, which detects the bat calls and amplifies the sound, making it easier for humans to hear the calls.

Rob Mies of the Organization for Bat Conservation, one of the featured speakers for the event, said the goal of the festival is “to teach people how important bats are.”

Bats eat insects, spread seeds and pollinate – all actions that benefit humans.

Mies brought two live Egyptian fruit bats with him for people to view. The Egyptian fruit bat is commonly found in caves or trees, eats only fruit or drinks nectar from flowers and is responsible for seed dispersal throughout the rainforest. However, the bat is decreasing in number because of habitat loss, he said.

Ron Richards, curator of paleobiology and chief curator of natural history at the Indiana State Museum, brought microscopes and fossils to the bat festival.

“Can you see the big white teeth?” Richards asked a young girl looking through the microscope at a vampire bat skull.

“Now you’ve seen a real vampire ... bat,” he said with a laugh.

The Indiana State Museum is responsible for digging up bat bones and fossils from Indiana caves. Because of white-nose syndrome, a disease of unknown origin that began destroying bat colonies in

the northeast and which is spreading, the equipment used in one cave is designated for only that cave.

“We are trying to avoid the white-nose syndrome, but we have to presume as though it is here. We don’t want to get any clay from one cave into another,” Richards said, explaining that all the tools are bleached, which leads to rusting, but at least they are clean. “We hope it doesn’t happen in Indiana.”

Still unconcerned about white-nose syndrome, 5-year-old Michael Scully took a tour through the bat cave, set up in a hallway of the Science Building, using a flashlight to maneuver through it.

“It was a blast,” he said. “It was dark and buggy, and I was spooked.”

Scully saw one (stuffed) bat, a centipede, a lizard and a lot of “big slime hanging down.” The slime represented stalactites, which form in caves when rainwater drips from the ceiling of the cave.

Scully wanted to go through the cave again, but he didn’t really want to go by himself. He decided he could go next year, since “I come here every year.”

The festival featured informational booths from the Wabash Valley Audubon Society, the Bat Gate Program of the Indiana Department of Natural Resources and the Indiana Native Plant and Wildflower Society, among others.

[Reprinted from the October 20, 2010 Terre Haute *Tribune-Star*.]

A FEW WORDS ABOUT THE SUBTERRANEAN FAUNA THE OF THE LOST RIVER (Orange County, Indiana)

by Jerry Lewis

With the IKC now managing two of the entrances to the Lost River Cave, I thought it would be interesting to give a brief summary on the biological significance of the cave. The interesting story of the recent exploration of the cave was told by Mark Deebel in the 2007 NSS Convention Guidebook. In 1931 a geologist at Indiana University, C.A. Mallott, produced a map of Wesley Chapel Gulf Cave that showed less than a mile of passages. The modern survey of the cave started in 1997 and surpassed 20 miles of mapped passages in 2005.

From a biological standpoint, between 1993-1994, I conducted the first comprehensive bioinventory of the Lost River area for the Corps of Engineers. At that time, I sampled the fauna in about 20 caves and found 92 species, of which 19 were troglobitic (obligate subterranean inhabitants).

Subsequently, I had the opportunity to do more sampling during work for The Nature Conservancy (see Lewis 1998) and again during bioinventory of caves for the Hoosier National Forest (summarized in Lewis & Lewis 2009a). Several caves are hydrologically linked in this system that support a community of obligate cavernicoles of global significance. The following is a list of the obligate subterranean species currently known from the Lost River System, including Wesley Chapel Gulf Cave, Elrod Cave, Hudelson Cave and Tolliver Swallowhole:

- *Sphalloplana weingartneri* – Weingartner's cave flatworm
- *Rheocyclops indiana* – Indiana groundwater copepod
- *Cauloxenus stygius* – Northern cavefish copepod
- *Crangonyx packardi* – Packard's groundwater amphipod
- *Crangonyx indianensis* – Indiana cave amphipod
- *Caecidotea stygia* – Northern cave isopod
- *Orconectes inermis* – Northern cave crayfish
- *Conotyla bollmani* – Bollman's cave milliped
- *Phanetta subterranea* – Subterranean sheet-web spider

- *Porrhomma cavernicola* – Cavericolous sheet-web spider
- *Sinella alata* – Indiana cave springtail
- *Arrhopalites bimus* – Shiloh cave springtail
- *Arrhopalites carolynae* – Carolyn's cave springtail
- *Onychiurus* undescribed species – cave springtail
- *Litocampa* undescribed species – cave dipluran
- *Pseudanophthalmus stricticollis* – Marengo cave ground beetle
- *Pseudanophthalmus youngi* – Young's cave ground beetle
- *Pseudanophthalmus* undescribed species – Lost River cave ground beetle
- *Spelobia tenebrarum* – Cave dung fly
- *Amblyopsis spelaea* – Northern cavefish

The list now includes twenty species, which is the “magic number” according to a paper published by Dave Culver and Boris Sket in 2000. In that analysis of global subterranean “hotspots” of biodiversity, there were only 18 caves and 2 wells on earth that had this many obligate subterranean species. Of those, three were in North America: (1) Mammoth Cave, Kentucky; (2) Shelta Cave, Alabama; and (3) the artesian well at San Marcos, Texas. Clearly the Lost River system is a very significant site on a global scale.

The magnitude of the fauna in Indiana caves frequently reflects the size of the cave, or the groundwater system containing a group of caves. The Binkley/Blowing and Sharpe Creek (Wyandotte) systems have similar large communities, and Marengo is just a hair behind. These large systems encompass relatively wide habitat diversity which leads to more inhabitants.

To give a couple of examples, the Lost River system is one of few in Indiana where two species of troglobitic spiders are known to occur, in this case the Subterranean sheet-web spider (*Phanetta subterranea*) and the Cavericolous sheet-web spider (*Porrhomma cav-*



ernicola). This is the only cave system in Indiana in which three troglobitic beetles (*Pseudanophthalmus*) are known. Two of them are endemic to the southern part of the Mitchell (Sinkhole) Plain, whereas the other one is known from a single specimen collected in Hudelson Cave. I remember well the instant that I found that beetle. I was looking at some wet, syrupy mud next to a small water fall. One moment there was nothing there, and the next, the beetle had appeared seemingly out of nowhere. Many attempts to find this beetle again have been to no avail, including going back and placing a dozen pitfall traps in a circle around the little water. This undescribed species (new to science) is a testimony to the rarity of some of the animals living in the Lost River system.



shrimp (*ostracods* of the genus *Pseudocandona*) have yet been found, but they are known from caves in surrounding counties and almost certainly occur in Lost River (see Lewis & Lewis 2009b). Likewise, no pseudoscorpions have been found there yet, but the troglobitic Indiana cave pseudoscorpion (*Apochthonius indianensis*) is known

from William Cleveland Cave (in the Orangeville Rise drainage of the Lost River basin). This species has also been found in several caves in the Tincher Karst in adjacent Lawrence County. Future sampling will undoubtedly add to the already impressive list of inhabitants.

References:

Culver, D.C. and B. Sket. 2000. Hotspots of subterranean biodiversity in caves and wells. *Journal of Cave and Karst Studies*, 62 (1): 11-17.

Deeble, M. 2007. The discovery and exploration of the Lost River Cave System, Orange County, Indiana, 1996-2007. *Back Underground in Indiana – Guidebook for the 2007 National Convention of the National Speleological Society*, pages 27-38.

Lewis, J.J. 1994. *Lost River cave and karst biological survey*. Final Report, U.S. Army Corps of Engineers, Louisville District, Contract No. DACW27-94-M-0110, 63 pages.

Lewis, J. J. 1998. *The subterranean fauna of the Blue River area*. Final Report, The Nature Conservancy, 266 pages.

Lewis, J.J. and S.L. Lewis. 2009a. *The subterranean fauna of the Hoosier National Forest*. Final Report, U.S.D.A Forest Service, Hoosier National Forest, 127 pages.

Lewis, J.J. and S.L. Lewis. 2009b. Range extension of the groundwater ostracod *Pseudocandona jeanneli* (Crustacea: Ostracoda: Candonidae). *Speleobiology Notes*, 1 : 14-16.

Packard, Alpheus S. 1873. On the cave fauna of Indiana. *Fifth Annual Report of the Peabody Academy of Science*, July 1873, Boston, 93-97.

The Indiana groundwater copepod (*Rheocyclops indiana*) has been found a single time in Elrod Cave, as well as two caves in Washington County. It is another case of an animal inhabiting a niche that indicates breadth of habitat diversity. This tiny crustacean was found in a drip pool, which indicates that it is an inhabitant of the groundwater flowing through the epikarst above the enterable part of the cave. As the groundwater habitats of the epikarst are sampled more and more, it is becoming apparent that the fauna there is much richer with species like *Rheocyclops* than had previously been thought.

This is not to say that all of the animals living in Lost River are incredibly rare, or so tiny that no one can see them. I recall the trip that a number of people attended to lead Congressman Baron Hill into the Lost River. I was standing on a ledge next to the stream with the congressman when a Northern cavefish swam up to our feet. Cave isopods (*Caecidotea stygia*) are abundant under rocks in the stream. Likewise, Bollman's cave milliped (*Conotyia bollmani*) is found throughout the cave. About $\frac{3}{4}$ of an inch in length and straw-colored, this animal is common in areas where organic material is present.

Despite several rounds of sampling, I am reasonably certain that more obligate subterranean species remain undiscovered in the Lost River Cave System. None of the subterranean seed

INDIANA KARST CONSERVANCY TREASURY REPORT

**Income/Expense Statement
From July 1, 2010 to September 30, 2010**

INCOME:

Dues Apportionment and Residuals	741.75	
Donations - General	678.65	
Donations - Land Acquisition Fund	62.00	
USFWS Habitat Grant	400.95	
SpeLoggers	300.00	
Interest	<u>518.20</u>	
		\$2,701.55

EXPENSES:

IKC Update (printing, production, mailing)	164.35	
Education / Outreach	0.00	
Stewardship	1590.42	
SpeLoggers	22.76	
Transfers to/from restricted funds/other adjustments	<u>368.53</u>	
		(\$2,146.06)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD: \$555.49

**Balance Sheet
September 30, 2010**

ASSETS:

Cash in Checking / Saving Accounts / CDs	114558.98	
Robinson Ladder Cave Preserve (73.48 acres)	162000.00	
Wayne Cave Preserve (20.00 acres)	75000.00	
Sullivan Cave Preserve (28.00 acres)	72000.00	
Buddha Karst Nature Preserve (36.84 acres)	29000.00	
Orangeville Rise Nature Preserve (3.01 acres)	7000.00	
Indian Creek Conservation Easement (valued at \$1/acre)	<u>13.16</u>	
		<u><u>\$459,572.14</u></u>

LIABILITIES & OPERATING EXCESS:

Land Acquisition Restricted Fund	37049.59	
Deferred Dues Restricted Fund (195 members)	3352.50	
Stewardship Endowment Restricted Fund	39858.35	
Previous General Fund (total)	33756.21	
Net Excess (Deficit) This Period	<u>555.49</u>	
Current General Fund (unrestricted)	34311.70	
Current General Fund (committed)	3000.00	
Real estate liquidity (basis value)	<u>345000.00</u>	
Total Liabilities & Operating Excess		<u><u>\$459,572.14</u></u>

IKC QUARTERLY MEETING MINUTES

Saturday, September 11, 2010 – Ferdinand, IN

BOARD MEMBERS PRESENT:

Jerry Lewis, President
 James Adams, Secretary (proxy by Salisa Lewis)
 Keith Dunlap, Treasurer
 Bruce Bowman (proxy by Sue Vernier)
 Dave Haun (proxy by Kevin Smith)
 Don Ingle
 Everett Pulliam
 Bob Sergesketter (proxy by John Benton)
 Bruce Silvers
 Karen Silvers
 Tom Sollman
 Richard Vernier
 Carla Winner
 Jamie Winner

BOARD MEMBERS ABSENT:

Bob Vandeventer

The Quarterly Meeting of the Indiana Karst Conservancy was called to order at 4:00 PM EDT at the home of Jamie and Carla Winner, at Ferdinand State Forest, Indiana, IKC President Lewis, presiding.

Four proxies were accepted. Previous minutes were approved.

Email Votes:

On 7/19/2010 Dunlap proposed, Lewis accepted, and Bob Vandeventer seconded the following motion: "By mutual consent, the IKC moves to waive the 30-day notice and terminate the lease agreement with the Hancock family immediately." The request was made to simplify a potential conservation easement that may be negotiated for that property. The motion passed 15-0-0 on 7/21/2010.

Treasurer's Report

Dunlap reported net cash assets of \$114,486.65, plus land at \$345,000, for a total of \$459,486.65. Funds included Land Acquisition, \$37,049.59; Stewardship, \$39,551.82; Deferred Dues, \$4,065.00; and General, \$33,820.24 of which \$3000 has been committed by previous Board actions.

The IKC has 192 paid members.

Education and Outreach

Don Ingle mentioned several upcoming activities: Indiana Bat Festival (September 17) at ISU. Hoosier Outdoor Experience (September 17-18 – Don e-mailed that we would not be able to attend this year due to Bob Vandeventer's surgery). There are a couple scout troop activities in the planning phase.

Robinson Ladder Cave Preserve

Jamie Winner indicated he mowed the clearing and lane two weeks ago. He also reported on the progress made for the October burn. He requested bids from three contractors with two responding. The winning bid was \$1975 from the same contractor we used previously (\$1750 last time). The IDEM burn variance has been submitted and is expected this week. However, there is currently a burn ban in Crawford County so until it rains and the ban is lifted, everything is on hold.

Wayne Cave Preserve

Dunlap believes the IKC will receive an offer for a conservation easement on the Wayne Property as part of the I-69 mitigation action. Dunlap also reported he has the I-69 Section 4 Draft Environmental Impact Statement (see more details later in the minutes) which indicated the cost of mitigation properties could be as high as \$16,600/acre when all is said and done, but Dunlap doubts this figure. The adjacent property to Wayne would also likely get an offer.

Indian Creek Conservation Easement

The IKC had a surveyor out twice this year to delineate the exact boundaries of the Indian Creek conservation easement. It is now clear one of the landowners is in violation of the easement with a structure that was constructed a couple of years ago. A letter was sent to the offending landowner, but no response has been received. Jerry Lewis, the easement monitor, has discussed the matter with Allen Pursell and Ellen Jacquart (both of TNC) on what the next steps should be and what are the mitigation options we should present (e.g., move the shelter or move the boundary). The plan is to send another letter as certified mail, giving them 30 days to respond. The IKC is obligated by the IRS to resolve this issue. IRS will get involved and that's a concern. Carla Winner suggested we consult an attorney prior to making the next contact, as this might turn into requiring legal action.

Buddha Cave Preserve

In July, DNR District Forester Janet Eger and Regional Ecologist Jason Larson toured the Buddha Karst Nature Preserve with Lewis, Dunlap, and George Cesnik (Property Manager). The tour was to determine the eligibility of the preserve to be enrolled in the Classified Forest and Wildlands Program. Eger indicated the property would qualify and subsequently drafted a management plan. The primary stewardship activities would be to continue controlling various invasives, reduce the fescue, and to maintain all the trees that have been planted since we took ownership of the property.



The main advantage of enrolling the property is to reduce property taxes to \$5/year.

Dunlap moved to enroll the Buddha Karst Nature Preserve in the Classified Forest & Wildlands Program with administrative costs not to exceed \$200. Seconded by Ingle. Motion passed 13-0-0. Dunlap will handle the enrollment.

Lewis brought up that the trees planted in 2009 and 2010 (about 8500 trees) will need weed control next year. This could be partially done by a contractor. This year, volunteers treated about 4000 trees manually. This is very labor-intensive. We have a quote from the tree contractor for spraying the 2010 trees next year. Carla Winner brought up concerns that a contractor may get sloppy and kill trees. Dunlap pointed out that the contractor actually sprays mechanically, so only gets between the rows. Dunlap wants to put together a plan to treat part of the trees manually and then get a new quote for the part to be done mechanically.

Sullivan Cave Preserve

The outhouse has been cleaned but we haven't gotten a bill. Bob Vandeventer is being assisted by Anthony Owens as related to the Cave Patron duties.

Suicide Cave

We received the new lease agreement from the owner in July and have paid the first year lease, so we are back in business related to cave access to that Washington County cave.

Hancock Property

The Coon, Grotto, and Shaft cave lease agreement as been temporarily terminated per a request from the owners (and the IKC elected to waive the waiting period). In negotiations with InDOT for an I-69 mitigation easement, the InDOT attorneys were concerned about our lease subverting the subsequent easement, so they requested it be terminated. The owners indicated they would like to resign a new lease once InDOT negotiations are over.

Lost River Cave

TNC steward Jesse Moore was met by Lewis and Dunlap to change out the locks on the two entrance gates on their property. The IKC is now officially managing those two entrances to the Lost River Cave system on behalf of TNC. Thanks to Joy Baiz, a nice laminated cave map is on display in the new TNC office and was greatly appreciated. So far one survey trip has been conducted.

The IKC needs to appoint a Cave Patron for this cave who will handle access and keep the appropriate records. Dunlap nominated Dave Tibbits, Mark Kraus, and Mark Deebeel. All are members of St Joseph Valley Grotto, the primary grotto surveying in the cave. After some discussion, Dave Tibbits was selected as the preferred candidate. Dunlap moved to appoint

Tibbits as the patron of Lost River Cave. Dick Vernier seconded. Motion passed 13-0-0

Shiloh Cave

Lewis is conducting a bioinventory in Shiloh Cave. Lewis and Tom Sollman are the primary investigators. Lewis brought up management issues; mainly that visitors are using the dry entrance. It was not sure if they had the owner's permission, although Sollman found some references on-line to suggest the owner is occasionally granting permission. There is no evidence of abuse/vandalism at this time. The IKC arranges access for 4-6 trips per year via the downstream entrance and Sollman suggested we ask cavers to keep an eye out for abuse, trash, etc. Sollman knows the dry entrance owner and may speak with him. Lewis plans to make at least one more trip within the next year. This cave has been highly studied by biologists in the past over the years, however, a lot more houses and septic systems are there now. The replacement gate installed in the mid-90s is ½ way filled with sticks and rocks. In a few years we should clean the detritus out to keep the food supply going through the cave.

I-69 Draft Environmental Impact Statement

Dunlap stated the DEIS was issued July 31st with comments due by September 28th. The released draft Karst Study appendix has been redacted to protect locations of caves. The IKC requested an unredacted copy, which was just received. There are lots of things wrong in the main document (Dunlap has not had a chance to review the karst appendix). Dunlap has already starting personal comments. The Board will need to decide if they want comments submitted on behalf of the IKC. There will definitely be impacts to karst as the highway passes through Monroe County. InDOT seems more concerned with which of the alignments will be used, not a build/no build scenario. The IKC and other groups (and perhaps some agencies) have asked for an extension. It was agreed that the IKC should respond with comments. There has been one public hearing, held in Bloomfield. It had a good turnout of perhaps 500 people. Each public commenter was allowed two minutes. There were probably 40 comments made with all but two against the highway. The two comments in favor were from the economic development person for Greene County and the mayor of Linton who said this new road would save Linton (they obviously had not read the DEIS which acknowledges little, if any, economic development will occur as a result of the highway being constructed).

Sue Vernier made a motion that the IKC make comments regarding the I-69 corridor project's impact on karst features. Pulliam seconded. Motion passed 12-0-1. Dunlap will handle drafting the comments. Ingle also suggested members make comments on personally.



Land Acquisition & Stewardship Activities

Megenity Peccary Cave: Allen Pursell, Cassie Hauswald (both TNC), Dave Everton, and Keith Dunlap met with the landowner for the property that most of the cave extends under, but the entrance to the cave is actually on US Corp of Engineers property. The landowner is interested in selling the Crawford County tract for conservation, but the property is probably not a good fit for the IKC because the entrance could not be controlled. The cave is significant because it does have one rare species, but it is more noted as being a paleontology site that has been excavated by Ron Richards of the Indiana State Museum.

Binkley area sinkhole dump – Haverty property: Jerry Lewis was contacted by a new landowner interested in having a sinkhole on their property cleaned up. Lewis and Kevin Smith investigated. The sinkhole has lots of appliances, rocks, construction material and junk in it. It would be a huge cleanup project and best left to the landowner to tackle. Some of the debris was supposedly dumped by the previous landowner *after* the transfer closed, so the new landowner needs to pursue this with the seller.

Lewis received a call from Indiana Railroad who was abandoning a spur line into Crane Navel base

in Lawrence County. The spur has a 1000-foot long tunnel and Indiana Railroad was interested in constructing bat-friendly gates at the portals. The DNR suggested the IKC might be interested. The caller indicated they would send additional information, but nothing has been received.

Items from the Floor

Carla Winner reported that a bat biologist is apparently going to be looking in DNR caves for 8 weeks to check for WNS [*editor's note: some follow-up with the DNR could not confirm this activity*].

Dunlap report the IKC has been awarded the 2010 NSS Group Conservation Award with a \$100 honorarium from the Cave Conservation and Management Section.

Salisa Lewis brought up the possibility of a 5K fun run/adventure run the IKC might want to sponsor as a fund-raiser (modeled after TNC's Hellbender Hustle). Nick Benton agreed to look into potential sites and see if Marengo Cave might be interested in co-sponsoring.

Next Meeting December 4th, 10am EST, Bloomington.

Meeting was adjourned at 5:59pm EST. The annual cook-out followed.

Respectfully submitted by Salisa Lewis, Acting Secretary.

▶▶ Continued from page 7....

endeavors. We are also starting to explore them more through a new committee formed (during 2010 NSS National Convention in Burlington, VT) within the NSS Education Division, the Outreach Through the Arts (OTA) Committee. We're in the process of forming an official steering committee, including actual scientists, artists, educators, and more. The Chairs of the NSS Fine Arts Salon, Education Division, and Conservation Division are all

involved (a brainstorming talk was given during the Conservation Division session this summer). A win/win for all is in the works. We're excited and will be sharing more details with you soon.

[*Note: A portion of proceeds from the sale of art at The Venue demo benefit the IKCs Education and Outreach Committee as well as the OTA Committee.*]

INDIANA KARST CONSERVANCY, PO BOX 2401, INDIANAPOLIS, IN 46206-2401

I would like to help the IKC protect Indiana's unique caves and other karst features. Enclosed is:

\$ _____ for IKC membership dues at \$15 per year (dues expire March 31st of each year, please pro-rate @ \$1.25/month).

\$ _____ donation to the general IKC fund.

\$ _____ donation restricted to a specific IKC project. Please specify: _____

_____ I know of an area worthy of protection. Please contact me.

_____ I would like to volunteer to help. Please contact me.

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

PHONE # _____

Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.

