Trash Sink Dig
November 18, 1995
“You must be getting close, I just saw a bat fly out”

By Rick Hines  NSS 37511

Twenty minutes before the appointed hour of 10:00, twelve cavers met for a late breakfast at Buddy’s Diner in Montreal. The KC contingent consisted of Randy Bruegger, his son TJ, Aaron Doyle (TJ’s friend), Richard Cindric, Rick Hines, Mike Kirch, and Harold Maris. Don Toole recruited help from LOG and he and Doug Feaks, George Gills, Lisa Frick Dalton, Steve Dalton, and one member of both grottoes, Ron Lathers, were ready to help.

As we consumed abundant helpings of eggs and biscuits and gravy, we reviewed maps and signed a liability release. The only other patron in the restaurant at that time overheard our discussion of sink holes and asked if we knew of a large sink about a mile southeast of Montreal. I said I had been there one rainy weekend this spring. I had talked with Junior Jones at that time to get permission to visit the sink and as I soon learned, I was talking to Junior Jones at this time. He invited me back again to see the sink in drier weather.

Soon, our host, Greg Fry arrived and joined us for breakfast. We offered to consolidate our troops in a few vehicles if parking at his place would be a problem. Greg assured us that with a few hundred acres parking should not be a problem. We followed him a few miles to the sink that was located across the road from his house on his grandfather’s land.

The sink formed approximately 30 years ago, draining a recently built pond. Our goal was simple, remove a few loads of trash, discover a deep pit and drop into a large cave system. After a dozen truck loads of trash and at least that many refrigerators were hauled to a more ecologically stable resting place a couple miles away, it became clear that our goal would not be reached with a one day effort.

Three trucks rotated between the sink and the new dump site. Greg worked with us all day. His four-wheel drive truck was the only one of the three with enough traction to drag the refrigerators from the pit. A human chain ferried five gallon buckets of glass, cans and plastic to the waiting trucks. We forced an opossum, two small snakes, one large rat and a lizard to find other winter accommodations. We entertained ourselves by dating the artifacts uncovered. We estimated the age
of everything from pop cans to bed pans. I was amazed at how well some of the plastic items had survived. A nicely preserved plastic water gun, plastic Santa and a bright yellow ball bat were found. As the yellow ball bat was thrown to the surface, Greg was heard to say, “you must be getting close, I just saw a bat fly out!”

We removed all the large appliances before giving up at about 4:00. We left a funnel shaped pit about 30 feet across the top and 15 feet deep on the high side of the hill and about 5 feet deep on the low side. No rock was exposed, and a 5 foot bar could be driven in at the base of the pit striking nothing firmer than a rusty can. Not yet having our fill of trash we moved on down the road and removed 5 or 6 trash bags full of trash from the mouth of Carroll.

We returned to Buddy’s Dinner where we had met nine hours earlier. When they saw us coming they called in extra help that must have been necessary to prepare the one pound hamburger most of us tried to eat. Digger Feaks worked harder getting his last bite down than he did dragging refrigerators out of the sink. TJ not only ate his, but begged for a second. Randy, concerned for his son’s cholesterol level, refused.

As we left we thanked our host, new friend and potential caver.

Thanks to Dave Porter for providing a map that helped locate the sink and to all that helped with the dig. A special thanks to the most hospitable land owner a caver could hope to met, Greg Fry. For the next dig he said he would get out his grill.

We will return. Anyone wishing to participate may call Rick Hines at 913 / 897 - 4285.
Trash Sink Dig 2  
Saturday March 16

We need someone with a truck to haul the trash to a dump site.

Meet at Montreal at 10:00 (intersection of 7 and E)  
or  
Depart from Hines’s house at 6:30 am.  
16525 Orchard Lane  
Stilwell, KS

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Trash Sink Dig 3  
Saturday Oct 5 199

Meet at Montreal at 10:00 (intersection of 7 and E)  
or  
Depart from Hines’s house at 6:30 am.  
16525 Orchard Lane  
Stilwell, KS

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<td>782-8100</td>
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Fence (11/7) Dig 4 (11/8) & Dig 5 (12/14) di  
Friday Nov 8 & Saturday Nov 9  
Meet at Montreal at 10:00 (intersection of 7 and E)

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Carroll Dig 5  
Saturday Dec. 14

Meet at restaurant at Montreal at 10:00 (intersection of 7 and E)  
or  
Depart from Hines’s house at 6:30 am.  
  16525 Orchard Lane  
  Stilwell, KS  
We will continue to dig in sink over end of Upper Thunder River. A break through  
is imminent. We will also do a GPS guided hike to point over end of DL7 where  
another sink is reported.

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Carroll Dig 6  
Saturday March 29  
Easter Sunday March 30

Meet at restaurant at Montreal at 10:00 (intersection of 7 and E)  
or  
Depart from Hines’s house at 6:30 am.  
16525 Orchard Lane  
Stilwell, KS  
We will continue to dig in sink over end of Upper Thunder River. A break through is imminent. We will also do a GPS guided hike to point over end of DL7 where another sink is reported.

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Carroll Dig 7

Friday May 23
8:30 a.m.  Depart from Hines’s house.
           16525 Orchard Lane
           Stilwell, KS
9:00 am  Pick up Terry DeFraties at 7 and 71 hy.

         drive 160 miles

12:00 noon.  Springfield (Journagan’s) NE corner @ 44&65 Hy
            select pipe, cut holes and weld as required
            load 7’ diameter pipe
4:00 noon  Depart for sink
           drive 77 miles
5:30 p.m.  Meet at restaurant at Montreal (intersection of 7 and E)
            deliver pipe to sink
            place pipe in sink
            dig
            Camp at sink

Saturday May 24
    Dig
    Explore Carroll cave
    Plan gate

We can also do a GPS guided hike to point over end of DL7 where another
sink is reported.
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Carroll Dig 8  
Saturday October 11, 1997  
Depart from Hines’s house Friday Oct 10 at 10:00 a.m.  
16525 Orchard Lane  
or  
Meet at sink  
Please call Hines if you can help.

<table>
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<td>Greg Buckley</td>
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<td>Eddie Simmons</td>
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<tr>
<td>Terry De Fraties</td>
<td>763-4252</td>
<td></td>
<td>?</td>
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<tr>
<td>Mary Williams</td>
<td>540-3961</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dave Roberts</td>
<td>878-0545</td>
<td></td>
<td></td>
<td>voice mail 978-0559</td>
<td></td>
</tr>
<tr>
<td>Carl Wagner</td>
<td>417-831-6310</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Tom Grant</td>
<td>561-4651</td>
<td>753-7600 x1555</td>
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Carroll Dig 9  
Saturday November 8, 1997  
Depart from Hines’s house Friday Oct 10 at 5:00 pm  
16525 Orchard Lane  
or  
Meet at sink  
Please call Hines if you can help.

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<th>Name</th>
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<tr>
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Carroll Dig 10  
Saturday November 8, 1997  
Depart from Hines’s house Friday Nov 7 at 5:00 pm  
16525 Orchard Lane  
or  
Meet at sink  
Please call Hines if you can help.

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<th>Name</th>
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<tr>
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<td>Plus one or more</td>
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<td>Dave Roberts</td>
<td>878-0545</td>
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<td>voice mail 978-0559</td>
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**Carroll Dig 12**  
**Saturday Dec. 13 and Sunday Dec. 14, 1997**  
Depart from Hines’s house Friday Nov 7 at 5:00 pm  
16525 Orchard Lane  
or  
Meet at sink  
Please call Hines if you can help.

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<td>Kevin Berdak</td>
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<td>768 - 2852</td>
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<td>11:00a to 3:00p</td>
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<td>Kate Johnson</td>
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<td>Paul Johnson</td>
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<td><a href="mailto:R.kramer@mdc.com">R.kramer@mdc.com</a></td>
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<tr>
<td>Kerry</td>
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<td>voice mail 978-0559</td>
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<td>Don</td>
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<tr>
<td>Bob</td>
<td>Younger</td>
<td>768-4524</td>
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Carroll Cave Conservancy (CCC)
Draft 1/10/98

Organizational Meeting

Thursday Jan. 22, 1998
7:00 pm
At Rick Hines’s
16525 Orchard Lane
Stilwell, Ks
Home 897 - 4258
Work 997 - 3585

If you would like to attend the organizational meeting or participate in the future please sign below. Take a copy of this draft and mark it with your comments or suggestions.

Name   Number    Jan 22    Future
Rick Hines 897-4258  Yes    Yes
Randy Bruegger 829-3943  Yes    Yes

Founding Members
Richard Hines
Eddie Simmons
Tim McClain
Greg Buckley
Greg Fry

CCC Mission Statement

To manage Carroll Cave in a manner that minimizes damages to the cave and its fauna while providing access for scientific study and exploration by responsible cavers.

Management Policies

Management policies shall be based on the following criteria:

a) Total elimination of liability for the land owner (Chris Danuser) and his representatives (his grandson, Greg Fry).

b) Each individual involved with the study or exploration shall certify in writing that they recognize the inherent danger to their life by participating in a sink hole dig and cave exploration and that they are solely responsible for their actions and will hold all other individuals and organizations harmless in the event of injury or death regardless of the cause or circumstances.

c) Elimination of liability for CCC organizers and members.

d) Protection and conservation of Carroll Cave and its ecological system.

e) Managed access for the purpose of scientific study, survey and mapping, and recreation. When protection and conservation conflict with access, management shall attempt to balance the competing goals.
f) Keep land owners informed and encourage their participation (Including Pembertons).

g) Encourage participation by all responsible cavers, and other with a vested interest.

h) Seek additional entrances.

i) Pursue long term contractual relationships with land owners to help insure the continuation of the CCC’s goals.

j) Purchase land over or potentially over Carroll Cave whenever possible.

Officers
The initial officers of the CCC shall be:

Chairman: Rick Hines
Vice Chairman: Eddie Simmons
Treasurer: Wayne Burnett
Secretary: Michelle Lowe

Legal Counsel: Bill J Hays

Committees:
The following committees shall be formed to conduct the business of the CCC.

Note: Volunteers or appointments at 1/22/98 meeting

a) Legal / Liability  -- Bill Hays
b) Safety – Steve Dalton
c) Gate – Doug Feakes, Peddgie Heinz
d) Constitution / bylaws
e) Survey / mapping
f) Fauna Survey
g) Hydrology / dye tracing
h) NSS / MSS / MCKC / Government liaison
i) Land owners liaison – Rick Hines, Eddie Simmons
j) Cow liaison – Doug Feakes
k) News letter / web page – Bill Pfantz, Randy Bruegger
l) Dig Labor Scheduling – Greg Buckley, Eddie Simmons, Rick Hines
m) Conservation and restoration

CCC attendees 1/22/98

<table>
<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Address</th>
<th>City</th>
<th>State/Zip</th>
<th>Phone</th>
<th>email</th>
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</thead>
<tbody>
<tr>
<td>Randy</td>
<td>Bruegger</td>
<td>2452 Mesquite Terr</td>
<td>Olathe</td>
<td>KS 66061</td>
<td>Home 913 829 - 3943</td>
<td><a href="mailto:Bruegger@qni.com">Bruegger@qni.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>work 913 768 - 8808</td>
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<tr>
<td>Greg</td>
<td>Buckley</td>
<td>Rt 1 Box 1352</td>
<td>Wheatland</td>
<td>MO 65779</td>
<td>417 - 282 - 5355</td>
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<tr>
<td>Wayne</td>
<td>Burnett</td>
<td>8322 Grant Ave.</td>
<td>Overland</td>
<td>KS</td>
<td>Home 913</td>
<td>Waynzwild@</td>
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<tr>
<td>Bryon Carmony</td>
<td>3512 N. 63rd Terr</td>
<td>Kansas City KS 66104</td>
<td>381 – 2216 World 816 561 – 3761 Worldnet.att.net</td>
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<tr>
<td>Steven R Dalton</td>
<td>2840 Bus. Hwy 54</td>
<td>Lake Ozark MO 65049</td>
<td><a href="http://www.hharmon.com/fricknfrack/fnf@mail.usmo.com">www.hharmon.com/fricknfrack/fnf@mail.usmo.com</a></td>
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<tr>
<td>Terry DeFrates</td>
<td>7114 Evanston</td>
<td>Raytown MO 64133</td>
<td>816 763 - 4252</td>
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<tr>
<td>Micki Feakes</td>
<td>12551 Utopia Dr.</td>
<td>Falcon Mo 65470</td>
<td>417 668 – 7724 <a href="mailto:Feakespeak@juno.com">Feakespeak@juno.com</a></td>
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<td>Doug Feakes</td>
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<td>Jim Fowler</td>
<td>6001 Oak St.</td>
<td>Kansas City MO 64113</td>
<td>816 523 - 4445</td>
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<tr>
<td>Bill Hays</td>
<td>SHB</td>
<td>604 N. Hemlock Ottawa KS 66067</td>
<td>785 242 - 6518</td>
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<td>Peddgie Heinz</td>
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<td>913 764 - 1288 <a href="mailto:BillPfantz@aol.com">BillPfantz@aol.com</a></td>
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<td>Kansas City KS 66106</td>
<td>913 375 - 9135</td>
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<tr>
<td>Mike Kirch</td>
<td>33805 Valleyview</td>
<td>DeSoto KS 66018</td>
<td><a href="mailto:mamkirch@gvi.net">mamkirch@gvi.net</a></td>
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<td>Michelle Lowe</td>
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<td>Kansas City KS 66104</td>
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<tr>
<td>Bill Pfantz</td>
<td>7205 Manchester</td>
<td>Kansas City MO 64133</td>
<td>816 737 - 1208 <a href="mailto:Zakeyton@aol.com">Zakeyton@aol.com</a></td>
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CCC News

98-02-01 22:37:14 EST

Dig14(1/24/98) went well. Eddie Simmons delivered three C-shaped pieces of steel pipe to the site. Greg Buckley, Doug Feakes, Greg Fry, Jim Fowler, Rick Hines, Ron Lather, Eddie Simmons, Carl Wagner, and Gary Bennett helped set the largest of the 3 pieces below the existing 16' of pipe. Buckley trimmed dirt from the side of the hole to make room for the new steel. Feakes welded the new section in place.

The next dig will be Feb.14 and 15. We will set one more 7' section of steel and then start digging. Feakes will bring a cutting torch and Eddie will bring the welder. If you know anyone interested in helping have them call me (816 / 897 - 4258).

On Jan.24 I stopped at the house southwest of the dig and introduced myself to the lady of the house. She grimaced slightly when I told her we were trying to dig into Carroll Cave. Her name is Crystal Carroll. Her husband, a native of area, was not home.

The second meeting of the CCC will be at Greg Buckley's, at noon on Saturday Feb. 21.

Rick

---

# Carroll Dig 14

**Saturday January 24, 1998**

Depart from Hines’s house Saturday at 6:00 a.m.
16525 Orchard Lane

or

Meet at sink

Please call Hines if you can help.

<table>
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<th>Work</th>
<th>Saturday 1/24/98</th>
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<tr>
<td>Greg</td>
<td>Buckley</td>
<td>417 / 282 - 5395</td>
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<td>Doug</td>
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<tr>
<td>Jim</td>
<td>Fowler</td>
<td>523-4445</td>
<td>yes</td>
<td>van</td>
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<td><strong>Rick</strong></td>
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<td><strong>897 - 4258</strong></td>
<td>997 - 3585</td>
<td><strong>Yes</strong></td>
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<td>Ron</td>
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<tr>
<td>Carl Wagner</td>
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<td>Claycomb</td>
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<td>De Fraties</td>
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<td>Foran</td>
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<td>HCR 67 Box 28B Stoutland Mo 65567</td>
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<td>R</td>
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<td>897 - 4258</td>
<td>997 - 3585  All</td>
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<td>Lawrence Ireland</td>
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<td>Paul Johnson</td>
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<td>Robert Kramer</td>
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<td><a href="mailto:Rkramer@mdc.com">Rkramer@mdc.com</a></td>
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<td>Harold Maris</td>
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<td>T</td>
<td>McClain</td>
<td>833-4784</td>
<td>2-7 9</td>
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<td>John McGuire</td>
<td>J</td>
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<td>761 - 1462</td>
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<td>782-8100 One</td>
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<td>Roberts</td>
<td>878-0545 direct</td>
<td>Michel Angelo</td>
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<td>John S Rosenkoetter</td>
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<td>C</td>
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<tr>
<td>Bob Wharton</td>
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<td>Aaron C White</td>
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<tr>
<td>Mary Williams</td>
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<td>Bob Younger</td>
<td>768 - 4524</td>
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<tr>
<td>Jamie Zawicki</td>
<td>417 272 8414</td>
<td>Branson West, MO PO Box 2068</td>
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Carroll Dig 15

Saturday February 14 and Sunday February 15, 1998

On Saturday we will set and weld in place one more section of pipe. Afterwards, and on Sunday we will start digging again. If you would like to help please sign below. We need about eight people each day.

<table>
<thead>
<tr>
<th>Name</th>
<th>Home</th>
<th>Work</th>
<th>Saturday 2/14/98</th>
<th>Sunday 2/15/98</th>
<th>Comment</th>
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<td>Steve</td>
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<tr>
<td>Doug</td>
<td>Feakes</td>
<td>?417? 668-1124</td>
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<td>Mike</td>
<td>Hartley</td>
<td>524-1979</td>
<td>353-0538 Yes</td>
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<td>Peddgie</td>
<td>Heinz</td>
<td>785-242-6518</td>
<td>785-229-8249 no</td>
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<tr>
<td>Rick</td>
<td>Hines</td>
<td>897 - 4258</td>
<td>997 - 3585 Yes</td>
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<tr>
<td>Brett</td>
<td>Jarrett</td>
<td>375-9135</td>
<td></td>
<td>Yes yes</td>
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<tr>
<td>Dave</td>
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<td></td>
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<tr>
<td>Eddie</td>
<td>Simmons</td>
<td>417-286-3134</td>
<td>Yes</td>
<td>no</td>
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CCC News

Dig 15 -- 2/14/98 and 2/15 -- Diggers: Greg Buckley, Steve Dalton, Doug Feakes, Marty Griffith, Mike Hartley, Rick Hines, Eddie Simmons, Cary Wagner.

We found about 3 feet of mud washed in from around steel pipe. We removed about 2 feet of mud to make room for a C-shaped section cut from a 6 foot diameter pipe. Steve Dalton chiseled away rock to make room for the new section of pipe while Doug Feakes used his cutting torch to contour the new section of pipe to Steve's specifications. We cut two holes in the top lip of the pipe in an attempt to align the holes over the center of gravity of the pipe. We learned the hard way on dig 14 that that was required if the pipe was to hang vertically. Everything worked will and the section of pipe slid through the slot Steve had cut and as Doug picked rocks from the lower edge of the pipe it slid perfectly into place, wedging itself between the side rocks. Doug welded the top edge to the section installed 1/24/98. We now have 16 feet of full 360 degree pipe and 14 feet of pipe sections tapering from 180 to about 100 degrees at the bottom.

We planned to dig on Sunday 2/15 but a shortage of diggers forced a change of plans. I talked to some of the neighbors.

I talked to the couple that own the land just west of the dig, Lyle and Christy Carroll. Lyle is related to Charlie Carroll, Carroll cave's namesake. Lyle has never been in Carroll cave but wants us to take him in when we finish the dig.

I also talked with Dwight Franklin, the Highway Patrolman who lives south-west of Greg Fry and used to own the land directly west of the dig that is now owned by Lyle and Christy Carroll. Dwight bought land (30A) in 1968. Pond existed then. He thinks the pond was built about 1950. In 1970 or 71 the pond suddenly went dry, forming the sink we are now digging in.

CCC Second Meeting, 2/21/98

The second meeting of the CCC will be at Greg Buckley's (417 / 282 - 5395), at noon on Saturday Feb. 21. With your Missouri State map and these directions you may be able to find him. Greg lives in Hickory Co. Mo., about 1.5 miles south of the Benton/Hickory Co. line and about 7 miles (as the crow flies) north of Wheatland. His house is on a gravel county road, #26. 26 meets K at a T-intersection 0.5 miles north of the intersection of K and B. Greg’s house is 0.5 miles west of the intersection of 26 and K, on the south side of 26, just west of a larger house with the name Godwin on the mailbox.

Each committee chairman should be prepared to report committee activity or plans.

Hope to see you a Buckley’s next Saturday.

Rick
Carroll Cave Dig 16, March 14 and 15

The good news was the weather on Saturday was clear, dry and in the forties, much better than forecasted a few days earlier. More good news, when I arrived about 7:00 a.m. three vehicles were already there and we had a total crew of 16 before the end of the day. The bad news, 13 feet of mud and rock. The saturated ground and the force generated by the material dumped over the edge of the pipe on prior digs, pushed a large lock into the hole. The opening allowed much of the material removed on prior digs reentered the hole.

Much of the effort and discussion was directed at reducing the flow of mud, rock and trash back into the hole. Tim McClain provided detailed advice on exactly what would and would not work. Doug Feakes and Eddie Simmons made a trip back to Doug's to round up a cutting torch and an arc welder. A section of six-foot diameter steel was cut and placed in the opening where the large rock had been. Outside the pipe attempts were made to stabilize the back-fill. Steve Dalton donated a large “party carpet” that was cut into strips for reinforcement. Matt Marciano and Carl Wagner made a trip to town and purchased a roll of plastic ground stabilizer (Cost: $96. Please send donations to Wayne Burnett). Ron Lather mined a near by dumpsite for concrete blocks that were used to surround the steel pipe and improve drainage. Rick Hines used a torch to cut holes through the pipe behind the concrete blocks.

We ate in shifts and continued digging and pulling rope until well past dark on Saturday. Greg Buckley lit the site with a 400-watt surplus billboard light. Peddgie Heinz, Kathy Summer and Terry DeFraties kept the diggers fueled with stew, potato soup and home made bread.

Greg Fry (the landowner) came by both days. He pulled rope, gave us plastic fiber mash from his hay bales, gave us permission to clear a campsite and construct a sky crater, and he told bad jokes. Martha Hoegler led a crew to cut, split and deliver a load of firewood to Greg. Greg may also find a use for four bags of excess Portland.

The weather deteriorated Sunday to a cold slow drizzle. The last of us to head home were on the road by 2:00. Thanks to Marty Griffin, Bob Parks and the other diggers mentioned above, we had removed eight feet of muck and hopefully taken measures to reduce the damage that well take place before we return April 4th.

Rick Hines
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Rick Hines
CCC SECOND MEETING

02/21/98

14 people in attendance

Greg Buckley and Martha  Rick and Kay Hines  Lisa and Steve Dalton
Terry DeFraites  Kathy Summer  Peddgie Heinz
Ron Lather  Mary Williams  Bob Parks
Wayne Burnett  Michelle Lowe

OLD BUSINESS

Started out with video of dig-steel in place, 4 pieces-5',11',7', and 7' have been put in place so far-35' down in depth

Gate Committee not present, Rick Hines reporting, Doug Feakes plans a steel lid on top, air-tight gate later time

Safety Committee- Steve Dalton reporting...no written rules or no means to create them, made some suggestions, observations, and recommendations

Last piece of steel was a great decision.

Legal Committee- Rick Hines reporting for Bill Hayes w/ Shook, Hardy, and Bacon pro bono (free of charge), releases to sign-see Rick. Those who were in attendance were given releases to read and sign if interested.

Regarding the releases were the following concerns and comments:

-Steve sees it from a political not a legal side.
-Lisa questioned the first paragraph.
-Terry says this is a first line of defense.
-Wayne suggested room for improvement.
-Terry also suggested release should be an on-going, inconclusive, indefinite type of thing.
-Rick will ask Bill Hayes' point of view.
-Also mentioned revise the release to permit those not of legal age type of thing.

-Hard Hat Issues: Greg Buckley spoke of his feelings on wearing a hard hat. Peddgie and Ron feel that if a person doesn't approve of an individual not wearing a hard hat, then that person doesn't have to take part in what goes on.

NEW BUSINESS
Discussion of new route to site (maps were handed out.

Conservation and Road Committee- Ron lather

Please add Carl Waggoner to the Gate Committee and Marty Griffin to CCC Web Page.

Last dig info. 1500' walking passage beyond break-down

Outhouse Committee- see Peddgie Heinz

Next digs scheduled for 3/14&15, 4/4&5, 4/25&26 see Rick Hines

MVOR May 1-3

Concern for cavefish and bats (first 600' in entrance? Jerry Vineyard's opinion was that it was not a problem. Also the State has no authority to manage caves on private property- Rick Hines reported.

Ron Lather- trash pickup around dig site, or should trash be put around the dig itself to fill in area?

Membership questioned- discuss at a later time

Range cook at dig a possibility

NEXT MEETING

April 18th, Saturday at NOON

Ron Lather's in Eldon, Mo

Directions later, contact Rick or Ron

Topic for next meeting:

Gating, Campsite, Release Revisions, Committee Reports, Possible Fund Raising

Following donations were given to CCC: $40-Greg Buckley , $10- Dalton, $20 Hines and $20 Ron&Lorely Lather

Respectfully Submitted,

Michelle Lowe

Carroll Dig 16

Attendance
Saturday March 14 and Sunday March 15, 1998

1) You must have a signed RELEASE on file to participate in this project.
2) Please check to insure that your name & info are correct on the attached CCC participant list.
3) See Hines for a Release form if needed.
4) Sign that you have a Release on file and check the date column for the days you participate.
5) Signup for Dig 17 and/or Dig 18.

Thanks

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<tr>
<th>Name</th>
<th>Sign here if you have a release on file</th>
<th>Saturday 3/14/98</th>
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<td>1/2 55 drum</td>
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<td>Lisa Dalton</td>
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Dig Report  
Carroll Dig 17  
April 4th & 5th  

Diggers:  
Greg Buckley  Wayne Burnett  Doug Feakes  
Greg Fry  Peddgie Heinz  Rick Hines  
Martha Hoegler  Dan Isbell  Ron Lathers  
Rolland Moore  Dave Porter  Ryan Thompson  
Mary Williams  

Three weeks ago, as we were leaving the dig, we could hear rocks banging against the steel shoring we had just welded in place. Will it hold or will we have another 12 feet of mud and trash washed into the hole? In the middle of the night, in the middle of a rainstorm, a week later, Ron Lather claims he could still hear the rocks falling against the steel.

As Dan Isbell and I approached the sink Saturday morning we noticed a 5-gallon plastic bucket setting by the fire pit. It had 14 inches of water! Fourteen inches of rain in three weeks! In spite of positive reports I had received from Greg Fry and Eddie Simons, I feared the worst as we walked down the hill to the dig. First I saw minor settling of the fill on the outside of the pipe, but not nearly as bad as three weeks ago. As we peered over the edge of the pipe we saw polished white rocks; no mud, just as Greg and Eddie had reported.

We pushed the bottom down 7 feet to a point 31 from the top of the pipe. We are now back to the depth we reached 12/14/97 when we first got air and bats. Before leaving we shored up soft spots to try to maintain the depth we have gained. We formed up one hole with plywood and filled the void behind with Portland steel and gravel. It should turn to reinforced concrete before we return. Other soft spots at the bottom of the hole were temporally shored with a plywood coverings and timbers to the opposite wall. Measurements were taken so that sections can be cut from additional 6-foot diameter steel pipe (now stored at Eddie’s house) to permanently plug the soft spots on a later dig.

Four star dinner and breakfast dining was provided by Ron and Pedggie.

Ron Lather will be responsible for the next dig April 25th & 26th. Manpower may be limited due to MVOR and other conflicts. Activity may be limited to peripheral projects (sky crapper). We will also try to get the steel cut and delivered so it can be set at the following dig in May. The date for the May dig will be set at the third meeting of the Carroll Cave Conservancy.

CCC Meeting, April 18, 12 noon  
Ron Lather’s (573 / 392 – 2372)  
111 N Maple, Eldon Mo.

Maps available on request.

Rick Hines

Carroll Dig 17

Saturday April 4 and Sunday April 5, 1998
If you would like to help please sign below. We need about ten people each day.

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<td>Marry Williams</td>
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Carroll Cave Conservancy Meeting
April 18, 1998
1112 N. Maple
Eldon, MO
presented by Mary Williams

Present: Rick and Kay Hines, Greg Buckley, Martha Hoegler, Ron and Lorely Lather, Peddgie Heinz, Bob Parks, Doug Feakes, Mary Williams, Wayne Burnett, Terry DeFraties

Meeting Casually Called to Order by Rick Hines.

Minutes of the Previous Meeting: Doug motioned we skip reading the minutes of the previous meeting. Those present seconded and passed his motion.

Treasurer's Report was presented by Wayne Burnett. He announced that CCC had $100 in its account.
**Report on Liability Release** was presented by Rick Hines. He reported that CCC’s attorney, Bill Hayes with Shook, Hardy and Bacon, advised CCC not to change the release form. CCC can treat minors on a case-by-case basis since only responsible parties of a majority (18) can sign a liability release form and have it mean anything. Bill Hayes also suggested that we not include an expiration date on the release form.

**Safety Committee** had no report to present.

An update of personal information was made by Rick H. as he passed around a sign up sheet for the next dig (April 25 & 26. 1998).

**Gate Committee’s report** was made by Doug Feakes. Doug said that he had the steel needed to cover the opening to the dig site. He also had plans to replace the ropes in the pulley system with a steel pipe frame. A possible source of the steel is from an old Camden county bridge near the junction of MO hwy 7 and county road # 765. The steel is 6" channel pipe. Martha Hoegler agreed to talk to the Eastern County Road Commissioner for Camden County to see if CCC can take some pipe.

The following committees had no reports to give: Constitution/Bylaws, Fauna Survey, Hydrology/Dye Tracing, NSS/MSS/MCKC Liaison.

**Landowner Liaison report** was given by Greg Buckley. He reported that Greg Fry currently owned the land that the dig is located. However, he is trading the acreage with some that his brother inherited. Greg’s brother supports the efforts of CCC but Greg Fry will probably continue to be involved and act as an intermediary between CCC and his brother.

**Cow Liaison**, Doug Feakes, said that the cows are calving now so, please drive slowly when driving through the pasture to the dig site.

**Newsletter/Webpage report** was not given. However, Rick gave out the website address to anyone who was interested. The site's address is: http://www.geocities.com/rainforest/canopy/2072/ Marty Griffin made the webpage and the newsletter is edited by Bill Pfantz.
Conservation/Restoration report was given by Ron Lather. Ron, Peddgie and others established the campsite on the last dig. A few rosebushes were left to be removed later. The outhouse site has been selected and we have landowner permission to cut a few trees for the project. Someone mentioned that it would be nice to get an old propane stove for the campsite. Terry said that he could provide a cover for it when the stove wasn’t used.

Fundraising & Expenses were discussed. So far certain individuals have spent a great deal of money (ex. Rick - $100 for stabilization cloth, Doug - $70 for propane, and more funds were spent for pulleys, rope, drain pipe and more). The question was raised, “Where can we get the funds necessary to cover our material costs?” Most people agreed CCC needed no more than $1,000-$2,000 per year. Rick got e-mail from a Robert Kramer of the MSS. He expressed some support for the Carroll Cave dig project. He mentioned that the MSS has some funds available for cave gating. Wayne referred to some funds that the MVOR has for various cave related projects. He intended to investigate this avenue while attending the Spring MVOR. Several corporate sponsors were mentioned as a possible fund source as well. Ron Lather agreed to review some NSS News back issues for ideas.

The possibility of attaining 501-C3 (non-for-profit) status was discussed with the objective being to give CCC greater credibility with potential corporate or foundation sponsors. Many were reluctant to follow through with this until Rick could get more information from Bill Hayes regarding the potential legal and tax benefits of the non-for-profit status. Besides the benefits Rick was to find out what was involved in obtaining this status. Members agreed to discuss this topic once Rick had that information (hopefully by the next meeting).

Review and Discussion of Future Digs: In the past few digs CCC participants removed >13 feet of mud that washed in from the December 14 dig where bats and air were moving. The hole is now 31 feet deep.

The CCC needs to be sure to reinforce the hole before leaving each dig to avoid losing ground like we did after the December dig. The hole must be covered when possible. There is some rock protruding into the hole that needs to be removed so that another steel pipe can be inserted into the hole and attached to the surrounding rock with pins. A ring then can be placed around the pipes at their juncture for additional stability.

Also, the sky crapper must be made as soon as possible.

Future Dig Schedule: May 16, 1998
                June 20, 1998

Future Meeting: July 18, 1998 at Doug Feakes

Carroll Dig 18

Saturday April 25 and Sunday April 26, 1998

If you would like to help please sign below. We need about ten people each day.
## Carroll Cave Conservancy

### Sign up

We need 12 or more 8-foot 2x4’s for the sky crapper. Can you help?
If you can help with one of the scheduled digs or plan to attend the next meeting of the CCC please add your name to the list below.

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Carroll Cave Conservancy

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May 16 and May 17, 1998

Diggers, both days; Doug Feakes, Peddgie Heinz, Rick Hines, Ron Lather, Bob Parks, Ryan Thompson
Diggers, one day; Gary Bennett, Greg Fry, Mitch Hines, Robert Kramer, Don Rimbach, Eddie Simmons, Don Toole, Carl Wagner

We were packed up and ready to roll out early Sunday afternoon when Greg Fry and Babe roared up on the four-wheeler.

We quit digging early to avoid digging below the existing shoring (actually we were beat from a long day Saturday with a minimum crew). While Babe and Muddy got to know each other, we showed Greg our progress. We had chipped away a 2 foot thick protrusion of rock to make room for another piece of steel from the 6-foot diameter pipe we have been using to shore up the dig. A 7-foot by 52-inch section was lowered into place at the bottom of the dig to cover the unstable wall below the rock we had jackhammered on for four hours. Additional drain holes had been cut to relieve water pressure on the outside of the outside of the 6-foot pipe. A 6-foot square sheet of 1/8 inch steel had been contoured to form a lid over the dig. Holes cut through the lid allow it to be chained and locked in place. Greg was offered a key but he felt it was unnecessary for him to have one. (Feakes, Hines, Lathers, and Simmons have keys.) All of the remaining trash around the lip of the sink was raked in to the hole, up against the pipe. We rationalized that all contaminates had previously decomposed form the remaining steel and grass. The jackhammered rock and the foot or so of material that had washed in, were hoisted to the surfaced and dumped on the trash fill around the pipe. This should serve as filter media to allow only water to enter the 6-foot pipe.

Greg offered to show us a sinkhole pond on his brother’s farm, 2 miles northwest of Montreal. The sinks in the area are interesting because they tend to support the existence of a yet to be discovered extension of the Carroll cave system to the northwest. Greg marked the location of the pond and several other sinks in the area on a Topo. The sinks tend to lie along a line between the dig and Montreal and on to the northwest! Four of us followed Greg to the 2-acre, and growing, pond. Greg pointed out large dead oaks just inside the perimeter of the pond and stumps in deeper water to convince us of the pond’s growth. Before heading home we discussed plans and preparations for the next dig. Doug will cut the remaining 270-degree by 7-foot section of pipe into two or three 270-degree short sections. As we dig deeper the C-shaped sections will be pulled in with a come-a-long, lowered in to the dig, and allowed to expand to support the non bedrock walls. Concrete will also be used to stabilize upper sections of the dig that are not covered by steel. We will need an arc welder to secure existing and new steel.

Thanks to generous individual donations, funds raised through a raffle at the MVOR, and a benefit auction and donation from KCAG, funds are available in the CCC treasury to support the purchase of supplies. Cutting torch gas and Portland will be purchased before the next dig.

Next dig: June 20th and 21st
Next CCC Meeting: July 18, 12 noon
Feakes Peak

Contact Hines if you can help. Maps available on request.

Rick Hines (913) 897 - 4258 or rickhines@aol.com

Carroll Cave Conservancy
**Sign up**

If you can help with one of the scheduled digs or plan to attend the next meeting of the CCC please add your name to the list below.

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**Dig Report**

Carroll Dig 20
June 20 and June 21, 1998

Diggers, both days; Greg Buckley, Wayne Burnett, David DeBold, Doug Feakes, Eric Fisher, Jim Folwer, Tim Harrison, Korey Hart, Peddgie Heinz, Rick Hines, Chris Kennedy, Ron Lather, Bob Parks, Tony Schmitt

Diggers, one day; Gary Bennett, Mitch Hines, Barry Godsey, John McGuire, Eddie Simmons, Regan Youngman, Carl Wagner

I’ll try to keep this brief. I am going on vacation to Alaska tomorrow and I have not starting packing.
We had a good crew of reliable regulars and new blood from both Kansas City and St Louis. I hope we see more of the enthusiastic crew from St Louis.

It rained hard Friday night, 3.5inches. When the rain stopped about 6:30 a.m. Saturday, water was flowing into the hole like Niagara Falls! Water was only standing about 3’ deep with the surface at 27’ from the top of the steel pipe. A few hours later the water flowing into the hole was reduced to a trickle but the depth at the bottom was still about 2 feet. We dug a little but did not make much progress because of the standing water. Since we could not dig we drove to Eddie’s to picked up a 3.5-foot tall 270-degree section of 6’ pipe for reinforcement at the bottom of the dig below the existing steel. The hole still looked good, with very little material washed in, considering the tremendous volume of water that ran in.

We enjoyed a fine spaghetti dinner with Dutch oven baked cinnamon rolls for dessert, compliments of the Carroll Cave Conservancy cooks, Peddgie and Martha. We hoped for a dry night so we could make some real progress Sunday. That was no to be.

Sunday morning, after about 2 inches of additional rain, we checked our depth gage. A shovel handle that was just above the surface Saturday afternoon was still just above the surface, after a heavy rain, with water still flowing into the hole at a high rate. We concluded the water must be moving horizontal, not down! The horizontal conduit must be large to accommodate the large flow with little change in head pressure.

More material was washing into the sink. A debris pile was forming on one side, just poking above the water surface. We walked back to camp, discussing the wet weather and thinking we would be getting home early. That was not to be!

Doug heard a large rock fall and called us back to the hole. A 2 to 3 foot cube-shaped rock had fallen from a spot at the base of the 11-foot section of pipe. We had been watching that rock for several digs and discussing ways to shore it up. That would no longer be necessary. As we watched, an avalanche of mud and rock washed into the hole. No longer were we planning to go home early. We had to plug the hole.

Part of the crew rigged a second block and tackle while others used a come-along to reduce the diameter of the 270-degree sections of pipe. We raised the 3.5 foot section over the top and lowered it into position to cover the cavity. Digger Doug dangled from a rope and released the come-along, locking the pipe into position. A few 2x12s behind the pipe blocked the hole and stopped the avalanche.

I pointed out that now with 3 feet of rock and mud above the water level we could continue to dig. By then the rigging was coming down and no one seemed to hear my suggestion.

Next CCC Meeting: July 18, 12 noon Feakes Peak
Next digs: July 25 and 26 Aug. 15 and 16
Contact Hines if you can help. Maps available on request.

Rick Hines (913) 897 - 4258 or rickhines@aol.com

Dig Report
Carroll Dig 21
July 25 and July 26, 1998
Diggers: Pauline Barendse, Greg Buckley, Wayne Burnett, Doug Feakes, Earl Hancock, Lannis Hancock, Rick Hines, Steve Kaub, Ron Lather, Bob Parks, Wayne Pierce, Eddie Simmons, Jeff Stilson, Carl Thayer, Lisa Thayer

First Dig

Greg Fry called me at home Sunday night. He said that whenever his pastures start getting dry he would call me to schedule a dig. He had 3.5” in the rain gauge for the weekend. Not quite as much as the June dig, but enough to keep the grass growing.

Thanks to some electronic wizardry provided by Earl Hancock, with support from Wane Pierce, we were able to confirm the dig location and depth to the cave. The bad news, 85’ to go (125’-28’-12’) to known passage. This depth is very close to the depth calculated based on topo elevations, estimates of stream fall and cave ceiling height at upper thunder.

Some additional shoring was put in place Friday afternoon. Everything looked good from the June dig. Very little if any additional material had washed or fallen in.

The rain slacked off enough Saturday morning for us to rig the pulleys and block and tackle, but then it poured. It was noon before the rain let up enough for us to start digging. There was no visible standing water when we started to dig. As we lowered the surface of the rock and gravel we found water. We uncovered the handle of the 3-foot shovel that we used to gauge the water level on the last dig. Four inches of the handle was exposed, the same water level as a month earlier. Again, I am convinced that most of the water that enters the sink is moving horizontal, over some restriction at that level, before moving down freely. Hopefully we will soon find the free path down, where the water goes and the air and the bats came from.

A hard rain early Sunday forced us to pack up and head home early, with no additional diggings.

The potential for another 85 feet of digging helped to stimulate interest in an alternate plan to open a back door to Carroll. Bill Hays (CCC’s attorney), had earlier suggested approaching drilling companies and requesting contribution of services to drill into Carroll. A good location for a drilled opening would be the T-Junction, a central location, providing access to three branches of the cave. I had previously located the surface location of the T-Junction based on cave maps, a digital topo and GPS readings. With Earl’s help we precisely located and marked a point 150 feet over the T-Junction. This point is about one mile east of the dig in an open, flat pasture, a quarter mile from a road, on land owned by Greg Fry’s brother, Chris Danuser.

As Greg and I talked Sunday night he mentioned that he had talked with his brother about the possibility of drilling into Carroll and that they both liked the idea!

Thanks to all who help with the dig, especially the first-timers that came from as far as Hollands (Pauline).

Next digs: Aug.15 and 16
Sept. 19 and 20

Next CCC Meeting: Oct. 3,
12 noon,
Truman Lake State Park
Lunch provided
Ski boat available before and after meeting

Contact Hines to sign up for digs and meeting. Maps available on request.

Rick Hines (913) 897 - 4258 or rickhines@aol.com
Dig Report
Carroll Dig 22
Aug. 15 and 16, 1998


“We have air!”

At about 1:30 Sunday I pried a basketball size rock from the mud and gravel at the bottom of our 32 foot deep shaft. The rock below was surprisingly clean with an opening large enough for me to stick my hand in. I removed a wet glove and reached down to test for air. I yelled up to Terry, Eddie and Greg, “We have air!” It was a very strong movement of air across my hand, which we soon determined to be moving into the hole. The opening is on the south side of the shaft. We are finally back to the depth where we got bats and air from a similar opening on the north side of the shaft on a Sunday nine months ago.

The dig started with a longer then normal drive down. I swung by Steve and Lisa’s shop near Bagnell Dam to again borrow Steve’s jackhammer. The jackhammer was necessary to break up a large rock that had fallen in two month ago. I arrive at the dig just after dark and found Greg and Martha sitting around a campfire. It was a very cool night for the middle of August and, even better, it was not raining.

On Saturday morning, as we waited for diggers to arrive, Greg and I cut down a large dead elm that was threatening to fall into the sink. We assumed the woodpecker living in the top of the elm and watching our progress all summer had raised her family and moved on. At about 11:00 my wife Kay, son Chad, sister Linda, brother-in-law Harold and nephew Charles arrived. My family had come down mainly to sightsee but we put them to work as mules pulling rope. When Peddgie arrived she was added to the mule team. Eddie arrived about 3:00 and by then my family had “seen” enough and headed home.

Eddie was eager to dig but with no mules we had to find another way to pull rope. We replaced the mules with a hundred horses under the hood of Greg’s 4-wheel drive truck. After removing a few rocks from the path of the truck this method worked well.

With the help of the mules and the horses we made good progress Saturday, pushing the bottom down 3 feet to the base of the steel and removing the large rock.

We quit digging when Peddgie and Martha caller us for dinner. After dinner we took Peddgie and Martha on a tour to the natural entrance of Carroll, which Peddgie referred to as the “other” entrance. Eddie headed for home after the tour, with a promise to return early Sunday and to try to recruit more diggers.

Eddie did return early Sunday but was unable to recruit more help. Eddie joined us for a breakfast burrito, prepared by the Carroll Cave Cooks, as we waited for Terry and Kathy to arrive from KC.

When Terry arrived we went to work with a four-man crew: one truck driver, one digger and two to guide and dump. We pushed down another 3 feet Sunday to a point 32 feet from the top of the steel pipe. We recovered two shovels and a bucket we hadn’t seen for two months and we got air. Before heading home we shored up the exposed walls with plywood cross-braced with 4 by 4s.

At the next dig we will dig a little deeper an set an existing 3.5 foot by 270 degree section of 6 foot diameter steel pipe at the base of the hole. Another 4 by 4 foot section of steel will be required to cover a soft spot just above this level.
Hope to see you at a dig.

Rick Hines

Next digs: Sept. 19 and 20
Oct. 17 and 18

Next CCC Meeting: Oct. 3,
12 noon,
Truman Lake State Park
Lunch provided
Ski boat available before and after meeting

Contact Hines to sign up for digs and meeting. Maps available on request.

Rick Hines (913) 897 - 4258 or rickhines@aol.com

Dig Report
Carroll Dig 23
Sept. 19 and 20, 1998

Diggers: Greg Buckley, Rick Hines, Martha Hoegler, Andy Isbell, Ron Lather, Tim
McClain, Bob Parks, Jack Rosenkoetter, Chuck Sacmmacca, Eddie Simmons, Jeff Stilson

Visitors: Bruce and his wife (neighbors to the east); Russell Jeffries (Ranch manager for Fry
and family) Russell’s son Rusty and his two kids; Greg Fry (land owner); Gary
Bennett, Don Rimbach and Robert Kramer (MSS); Dave Porter, his wife and
son DJ.

We still have air (300 ft per minute)!

Friday afternoon I met Danny Schupbach at Journagan Construction in Springfield. Eddie had visited
Danny on Wednesday and found one last section of 6-foot pipe that Danny said we could have. Danny
has provided the 6-foot diameter pipe we have used to shore the dig. I called Danny Friday morning to
ask a few more favors. In addition to giving us an additional 5-foot section of pipe, would he please cut a
4 by 5 foot rectangle from the pipe and could we pick it up this afternoon? Yes! I arrived at Journagan’s
at the appointed hour but as usual, Eddie was late. This gave Danny and I a chance to talk as we waited
for Eddie to arrive with his truck. Danny wanted to know all about the dig so he could think of new ways
to help. I gave Danny a video to update him on the recent digs and to show him how we were using his
pipe. Eddie arrived and Danny used a large forklift to load both pieces of the pipe in Eddie’s truck for
delivery to the dig Saturday morning.

I arrived at the dig at dusk to find Martha, Greg and Bob sitting around a campfire with Bruce. Bruce
lives in the trailer just East of the gate to the dig. Bruce was the first of many visitors that weekend.
Bruce and his wife came back on Sunday and Bruce asked for, and got, a trip to the bottom of the hole to
get a different perspective on the dig.

On the first trip in to the hole Saturday everything looked good. The temporary shoring from the prior
dig had done its job. Very little material had washed into the hole and there was no standing water. A
large rock (4 foot by 8 foot exposed face) on the south that leans against the bedrock on the west had not
moved. A 4 by 4 wedged under the large rock was easily removed by hand.

We again used Greg’s truck to pull rope to move diggers in and out of the hole and to move rock. The
rock we had to remove was larger than expected and we had no jackhammer due to a miscalculation on
my part. Ron and Bob made a trip to Lake Ozark to again borrow Steve Dalton’s electric jackhammer.
Several times during the dig Saturday we could feel air moving into the cave. The space between most of the rock at the bottom is filled with mud but some areas are clean. An air velocity gauge measured 300 feet per minute going into a small hole with clean rock at the bottom.

At about the 31-foot level the bedrock wall on the west starts to curve away from the hole. We hope we will be able to follow the bedrock into the cave. At least we will be able to move the axis of the shaft to the west and provide a safer area for the digger to work, out of the path of material being hauled to the surface.

A few of us scraped the mud and rock dust from our bodies and went into town for dinner Saturday. We returned after dark to find a 400-watt light shining above the hole. We pulled the jackhammer and last digger out at about 11:00pm Saturday night.

Our goal Sunday was to get steel in place. We chipped a few more rocks and squared up the sides of the hole to receive the steel. The 4-foot wide 5-foot tall section of pipe went in below the large rock on the south. We used Greg’s cutting torch to cut two sections from a 3.5-foot tall section of the 6-foot pipe. The three pieces of steel covered three sides of the hole leaving the cavity under the bedrock on the west open. The cavity under the bedrock is now about 3 feet wide, 2 feet tall and extends 2 feet to the west.

Special thanks to:
Martha Hoegler and Barny McKye for cash donations made this month.
Danny Schupbach for 6’ steel pipe.
Greg Buckley for providing generator, cutting torch, welder, truck and light.
First time diggers, Andy Isbell and Chuck Sacmmacca. They did a great job. I hope to see them again.
Steve Dalton for the use of his jackhammer.
Don Rimbach for donation of custom built digging tools.
The reliable regulars, the diggers that show up month after month.

Hope to see you at a dig.

Rick Hines

Next CCC Meeting: Oct. 3, 12 noon, Truman Lake State Park
Lunch provided
Ski boat available before and after meeting

Sky Crapper Construction Oct 4, Lumber and roofing will be available to complete the project.
Please contact Ron Lather if you can help.

Next digs: Oct. 17 and 18
Nov. 21 and 22

Contact Hines to sign up for digs and meeting. Maps available on request.

Rick Hines (913) 897 - 4258 or rickhines@aol.com
Ron Lather (573) 392 - 2372 or lathers@usmo.com
CCC 5

<table>
<thead>
<tr>
<th>Expect Saturday</th>
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Polish  
Chicken  
Charcoal  
Starter fluid  
Buns  
Ketchup  
Mustard  
Pop  
Beer  
Chips  
Hot Drinks—Apple cyber, hot chocolate, coffee  
   Coleman stove  
   Fuel  
Maps  
GPS  
   Download data  
Chain saw  
Carpenter tool  
Take  
Photos  
Cameras  
CCC Participant list  
Maps  
Meeting dig signup  
Blue tarp and rope  

Call people  
Fry  

New Business  
1)
9/28/98  Ron Lather called. He met Jim Herdick at MVOR  Jim is digging in a sink hole with his cousin trying to get in to Carroll. Based on what Ron said and my notes his cousin must be Larry Birkey. From NSS member manual  Jim Hendrick  1507 W Park Ave, Champaign IL 61821  217 356 0983. Called Larry Birkey not home wife said call back Tuesday around 8:30 PM. Called Jim Hendrick Dig is on Larry Birkey property. Quarter mile north west of end of road. Dug with rented small backhoe and track hoe of friend. Twenty five feet down. 5 or 6 feet washed back in. Trying to get larger equipment this winter. Loose gravel. Jim will call me the next time he comes down. He has property off m that is off 7 south of Warsaw. Cave on that property.

Will met Larry Birkey at 9:00 am on Saturday at his place. Look at his dig. Then look at CCC dig

2)  
Carrollcave.org  
Marty Griffin  
212 E. Church St.  
Webb City, MO 64870

You should add Bob Reynolds (MVG editor). I think his address is bob4mvg@earthlink.net

If that's not it, let me know.

I registered the site tonight. They'll bill me and then we can turn it on. 
Should help us in getting people to use the site so they'll always know when the dates are and the latest progress and status reports, etc.

Marty paid $35 Rick paid $35

3)  
You should add Bob Reynolds (MVG editor). I think his address is bob4mvg@earthlink.net

4)  
We have EIN 48-1206357

5)  Received  501 (c) (3) info from Bill Hays

6)  radio update

7)  
Election of officers

Carroll Cave Conservancy

Sign up for a dig  (Third weekend of each month)  
Sign up for CCC meeting

We need:  1) Lumber for the sky crapper and lumber for shoring, Structural steel and pipe

2) Your retired climbing rope

3)
Meeting #5
Truman Lake State Park

<table>
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<th>Name</th>
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CCC Meeting Minutes
10/3/98
Recorded by Kathrine Summer

Attendance: Greg Buckley, Wayne Burnett, Terry DeFraties, Kay Hines, Rick Hines, Martha Hoegler, Ron Lather, Kathrine Summer

Meeting called to order @ 1:05pm at Truman Lake by Rick Hines

Dig Reports passed around

Minutes of July 18, CCC Meeting were read.

Treasurers Report given by Wayne Burnett - $430 available
$85 donations received a last Dig and $85 Distributed for immediate expenses We now have EIN. Wayne will open a checking account for the CCC.

Old Business
* Bridge steel -- At a future dig we need to contact Larry Cleavland at fish hatchery about bridge steel.
* Skyscraper -- Report by Ron Lather
Lumber not ready for this weekend. Eddie will reorder. With luck it will be available for next dig along with misc. hardware. Restoration of throne (found with other trash in sinkhole) is complete. Roof steel has been donated and delivered by Martha. If we have a big crew at the next dig we can work on skyscraper and dig.

New Business
* December dig date set: December 12 and 13
* Maps to dig available and passed out
* Gate should always be closed regardless if you find it open or closed.
* Another dig is being done by Larry Birkey (1.5 miles NNW). We will meet with Larry at his land at 9:00am 10/4/98. He will show us his dig and them come look at ours.
* The CCC Web Master, Marty Griffin, is setting up a new web page URL. New address will be http://www.carrollcave.org or http:\carrollcave.org
(current address: http://www.geocities.com/rainforest/canopy/2027/)
Marty would like photos of Carroll Cave to add to the page.
* MVG editor, Bob Reynolds added to CCC email list
* We now have an EIN so we can open a checking account.
* Discussed 501-C-3 status for CCC. $150 application fee. Advantage: Donated $ are tax deductible.
* Discussed welding of steel shoring. Could devote a day to just welding.
* Nominating Committee volunteers should contact Rick Hines.

Meeting adjourned @ 2:20

Post meeting: Notes by Rick Hines
* After the meeting we took a boat ride around Truman Lake and made a few stops to look for fossils. We found the only two spots on the lake where no fossils can be found.
* Sunday 10/4/98 - Larry Birkey's dig
Ron, Kay, Rick, Greg and Martha met Larry and drove about a quarter mile across his land to a sinkhole he is digging in. He has used a backhoe to go down about 25'. The dig is now about 15' due to material washing in from a near by creek. He hopes to get a big backhoe for use over the winter. He is about a quarter mile from the nearest mapped section of lower Thunder River. After viewing his dig he followed us to Fry's land to see our dig. We
took him to a point near the T-junction where he demonstrated his cave dowsing skills. He gave each of us an opportunity to demonstrate our dowsing ability (or lack of).

Carroll Dig 24
Oct. 17 and 18, 1998

Diggers: Greg Buckley, Terry DeFraties, Eric Fisher, Rick Hines, Martha Hoegler, Ron Lather, Tim McClain, Jeff Page (first dig)

Visitors: Greg Fry (land owner), Steve Dalton (delivered jackhammer and beer), Larry Birkey, Jim Hendrick and wife, Kathy Summer and son

VOIDS BETWEEN THE ROCK AT 40 FEET

Jeff Page and I left my house Saturday morning at 5:30. It started to rain as we pulled out of the drive. The rain continued, with some very hard down pours, until we reached Camdenton. Jeff and I thought his first dig was going to be a washout. As we approached the dig the rain stopped and the pavement was dry. The weather was threatening all day, but no rain until late afternoon.

Greg, Eric, Martha and Ron had camped at the dig so we had a full crew. I was down hole by 9:00. The shoring had held. We heard they had 3 or 4 inches of rain the Sunday KC got flooded, so I was pleasantly surprised at the small amount of material that had washed in. I cautiously removed the cross braces that were supporting the steel we had set last month. No movement, in spite of the fact that one of the three was not welded at all and a second section was only connected in one corner.

As we discussed ways to weld the steel an add angle iron under a large rock we soon encountered a problem. Greg had forgotten to bring a four-wire to three-wire adapter necessary to make his wire welder work and I had not yet purchased welding rod for my Lincoln. The problem was then followed by a bad decision. We decided to dig. We would continue moving deeper under the bedrock ledge exposed on the west and leave a shelf of material under the poorly attached steel on the south and east.

We made good progress Saturday. We got standing room under the ledge. Tim wrestled several large rocks to the board that were hauled out. We earlier assumed the rocks would require a jackhammer. Ron and Martha completed the roof on the sky crapper. About 5:00 it started to sprinkle so we cross braced the steel and headed to town for dinner.

We got about an inch of rain overnight but Sunday morning was cool and dry. It turned out to be a beautiful day. Again, I gingerly removed the cross bracing and saw no movement of the steel. We dug deeper. We continued down in a 3-foot diameter foxhole under the ledge and reached a depth of 40 feet. We found several areas with loose, clean, airy rock. Jeff opened a horizontal passage a foot in diameter extending 4 feet into the north wall. Clean white rock could easily be removed by hand.

Ron didn’t get a chance to dig Saturday because he worked on the sky crapper. It was mid-afternoon before he got a turn Sunday. He had barely gotten to the bottom of the hole when the 4 by 5-foot section of steel on the south slid down toward him. It moved down a foot with the base moving a foot or more into the hole. I don’t know if Ron was frightened but something was said about clean underwear.
I went down to inspect the damage. We hooked a block and tackle to the top of the steel. I moved above the steel as the crew above pulled rope. I expected an avalanche when the steel was raised. I was surprised to see only a small volume of mud and rock slide into the foxhole below. As the steel sheet swung to the center of the hole I could see that the rock and dirt behind it were still stable. As the crew above raised the steel I stuffed the top edge under a large rock above. I measured for cross bracing, which was cut to order and lowered into the hole. As the cross braces were sledge hammered into position the steel moved neatly back into place. Additional cross bracing was set on the remaining steel and plywood and bracing placed to support the non-bedrock walls below the steel.

We relearned a lesson: Proper shoring is more important than digging! We will weld before we dig again.

Hope to see you at a dig.

Rick Hines

P.S. -- On a prior dig Kevin Bardak mentioned that he has access to a large trailer mounted welding rig. I called Kevin Monday and he agreed to bring it down from St. Louis. The date is not yet known.

Welding Party: Before the next dig – date to be announced
   (Donations of scrap iron or structural steel would be appreciated).
Next digs:   Dig 25 Nov. 21 and 22
            Dig 26 Dec. 12 and 13

Contact Hines to sign up for digs and meeting. Maps available on request.

Rick Hines   (913) 897 - 4258   or   rickhines@aol.com

Dig Report
Carroll Dig 25
Nov. 21 and 22, 1998

Diggers:    Bernhard Arnold, Greg Buckley, Terry DeFraties, Dave Foran, Greg Fry, Carolyn Hartley, Mike Hartley, Todd Heintz, Jim Hendrick, Rick Hines, Martha Hoegler, Tim McClain, Jeff Page
Visitors:   Larry Birkey, Terry Sherman

ALMOST A CAVE and only three years after dig 1

Friday night Jim and I could fill warm moist air rising from an opening in steel plate over the dig. My velocity gage measured 100 feet per minute through a square foot opening. The next morning was a chilly 28 degrees. As I walked to the dig I could see a cloud hanging in the trees just west of the sink. The source of the cloud was soon found to be a wisp of mist rising from the opening in the lid.

It’s almost a cave! On Saturday, as we pushed the bottom of the six-foot diameter shaft to the 40-foot level, we found large openings between the jumble of rocks on the south. Large enough to crawl in, but too unstable. We could see horizontally for about eight feet and could see opening dropping at least 5 feet vertically. The floor, at the forty-foot level, appears to be the top of a breakdown pile. Terry could thread 4 feet of a pry bar through visible openings between the rocks.

We quit Saturday night after several hours of jackhammering on very hard sandstone rocks that protruded into the hole on the east. We worked under lights Saturday night until we had the hole nearly ready to receive another 5 feet of steel.
Terry Sherman came by Saturday night to show off his Carroll Cave Calendar. It’s a nice job with some very good photos. If you are interested contact Terry (417-889-2933 or sherman@cland.net). A portion of the proceeds will be donated to the CCC.

On Sunday things did no go quite as planned. Each time, as we cleared the last few rocks from the south wall to make room for the steel, more rocks would fall from behind the steel above. Saturday’s assessment of an unstable cave was correct. Five foot of depth below the existing steel soon became two feet. It took until mid afternoon to recover the lost depth. By then part of the crew had already headed for home and we were short handed for lowering the C-shaped steel band into place. Fortunately Jeff Page, Bernard Arnold and Greg Fry arrived, think they were just spectators. We handed them a rope and said pull. As we hoisted the steel up and into the hole Tim told us it was not going to fit. We struggled for half an hour trying to lower the 400 pound square peg in to the round hole before pulling it out and admitting that Tim was right. We started over with a slightly smaller section that we eventually got into position to cover the unstable south wall (and our Almost Cave). After Greg and Tim welded the steel into place a smaller section of steel was lower for the north side. By then Greg’s wire welder had jammed and we decided it was too late to try to rig an extension cord for my AC welder. Greg called out the length for a cross brace. A 4 by 4 was cut, lowered into the hole, and wedged into place. We packed up in the dark and headed home.

A special thanks to Jim Hendrick, who drove from his home in Champaign, Illinois. He plans to be back for the December dig.

Hope to see you at a dig.

Rick Hines

Next digs:            Dig 26  Dec. 12 and 13
                     Dig 27  Jan. 16 and 17 (if needed; we should be in December)

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines     (913) 897 - 4258     or     rickhines@aol.com

Dig Report
Carroll Dig 26
Dec. 12 and 13, 1998

Diggers:     Steve Atteberry, Greg Buckley, Jeremy Eaton, Doug Feakes, Eric Fisher, Mitch Hines, Rick Hines, Peddie Heinz, Ron Lather, Mike Luthy (Luther), Dave Porter, Dave Porter Jr., Ben Sawyer, Eddie Simmons, Carl Thayer, Lisa Thayer, Mark Williams, Luther ??
Visitors:   Chris Danuser, Greg Fry, Russell Jeffries, Jeanne Hines (first time)

Eddie Smells Cave

At 4:00 Sunday afternoon I had to insist that Eddie and Jeremy quit digging and come up so we could get the hole shored up and pick up our toys before dark. They had opened up a hole in the floor several hours earlier and were franticly trying to open it up to body size before quitting. Before they came up they dangled a fluorescent trouble light down the opening. As we fed them more extension cord, we could see, from our perch 43 feet above, the light sliding down between the rock for another 6 to 8 feet.

I dropped down to do the final shoring inspection and shoring. Steel lines the hole to the 40-foot level except for the alcove on the west. The alcove is now ten feet tall, four feet wide, and extends two to three feet back under the “bedrock” on the west. The alcove provides safe haven for the digger or diggers as the haul board is raised and dumped. Saturday we added a 5-foot tall section of steel on the north and a 30-inch wide by 5-foot tall section on the south side of the alcove. Greg had securely welded the new steel in place. I stood in the alcove and looked over the steel on the south of the alcove and
behind the steel on the south side of the dig. A large void exists behind the steel on the south and leads to the cave like opening on the southeast corner of the dig that was found last month. Eric Fisher climbed behind the steel Saturday and said the opening was still clear, angling down and away from the center of the dig for ten feet. A smaller opening behind the steel on the north, uncovered two months ago, can still be seen by looking behind the steel where it meets the alcove on the north. I wedged and nailed boards and beams to shore the exposed surfaces below the steel. Most areas looked fairly stable, being composed of more rock than mud.

I visited Danny at Journagan’s before this dig to see if they had more steel we could use for shoring. Danny and I walked around the yard looking for steel tanks we could use. Unfortunately they have no more 6-foot pipe like we have been using. They do have several tanks, both smaller and larger, that Danny generously offered. Eddie will try to pick up a 5’-4” diameter water tank that we can cut up and use for shoring.

A special thanks to:
Carl and Lisa for bringing a smoked ham for Saturday dinner. Lisa not only helped prepare the meal but she also helped complete the sky crapper and cleared and burned brush around the campsite.
Dave Jr. for his effort to clear paths between the dig and campsite.
First time diggers Steve, Ben and Mark from Lake Ozark Grotto and first time digger Luther Ron Lather for his efforts that led to the christening of the Sky Crapper (Maybe now we can get him back to digging).
Danny Schupbach (Journagan Construction) for continuing to “support” our effort.

To take advantage of Eddie’s enthusiasm a special dig is now scheduled for Dec 26 and 27.

Hope to see you at a dig.

Rick Hines

Next digs:    Dig 27 Dec. 26 and 27
            Dig 28 Jan. 16 and 17

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines    (913) 897 - 4258 or rickhines@aol.com
Dig Report

Dig Report
Carroll Dig 27
Dec. 12 and 13, 1998

Diggers:    Steve Atteberry, Greg Buckley, Jeremy Eaton, Doug Feakes, Rick Hines,
            PeddgieHeinz, Ron Lather, Dave Porter, DJ Porter, Ben Sawyer, Ed Simmons,
            Carl Thayer, Lisa Thayer, Mark Williams, Luther ??
Visitors:   Chris Danuser, Greg Fry, Russell Jeffries

ALMOST A CAVE and only three years after dig 1

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It’s almost a cave! On Saturday, as we pushed the bottom of the six-foot diameter shaft to the 40-foot level, we found large openings between the jumble of rocks on the south. Large enough to crawl in, but too unstable. We could see horizontally for about eight feet and could see opening dropping at least 5
feet vertically. The floor, at the forty-foot level, appears to be the top of a breakdown pile. Terry could thread 4 feet of a pry bar through visible openings between the rocks.

We quit Saturday night after several hours of jackhammering on very hard sandstone rocks that protruded into the hole on the east. We worked under lights Saturday night until we had the hole nearly ready to receive another 5 feet of steel.

Terry Sherman came by Saturday night to show off his Carroll Cave Calendar. It’s a nice job with some very good photos. If you are interested contact Terry (417-889-2933 or sherman@cland.net). A portion of the proceeds will be donated to the CCC.

On Sunday things did no go quit as planned. Each time, as we cleared the last few rocks from the south wall to make room for the steel, more rocks would fall from behind the steel above. Saturday’s assessment of an unstable cave was correct. Five foot of depth below the existing steel soon became two feet. It took until mid afternoon to recover the lost depth. By then part of the crew had already headed for home and we were short handed for lowering the C-shaped steel band into place. Fortunately Jeff Page, Bernhard Arnold and Greg Fry arrived, think they were just spectators. We handed them a rope and said pull. As we hoisted the steel up and into the hole Tim told us it was not going to fit. We struggled for half an hour trying to lower the 400 pound square peg in to the round hole before pulling it out and admitting that Tim was right. We started over with a slightly smaller section that we eventually got into position to cover the unstable south wall (and our Almost Cave). After Greg and Tim welded the steel into place a smaller section of steel was lower for the north side. By then Greg’s wire welder had jammed and we decided it was too late to try to rig an extension cord for my AC welder. Greg called out the length for a cross brace. A 4 by 4 was cut, lowered into the hole, and wedged into place. We packed up in the dark and headed home.

A special thanks to Jim Hendrick, who drove from his home in Champaign, Illinois. He plans to be back for the December dig.

Hope to see you at a dig.

Rick Hines

Next digs: Dig 26  Dec. 12 and 13
           Dig 27  Jan. 16 and 17 (if needed; we should be in December)

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines  (913) 897 - 4258  or  rickhines@aol.com
Dig Report
Carroll Dig
December 26 and 27, 1998

Saturday’s Diggers:  Dave Hoffman, Carl Thayer, Lisa Thayer, Greg Buckley, Jeremy Eaton, Ryan Thompson, Mike Luthy (Luther), Bob Parks, Peddie Heinz, Greg Fry, Marty Griffin and Doug Feakes

Sunday’s Diggers:  Eddie Simmons, Carl Wagner, Lisa Thayer, Carl Thayer, Greg Buckley, Ryan Thompson, Jeremy Eaton, Bob Parks and Doug Feakes

A family Christmas dinner kept me away from this dig. The following report is based on information provided by Doug Freaks, Eddie Simmons and Greg Buckley.

Safety First!

Saturday’s effort to square up the bottom of the hole so that more steel could be set was frustrated by mud sliding in below the steel on the south side of the dig. Greg said, “for each shovel full removed two
more would slide in.” This continued until all the loose material behind the steel on the south had been removed. By Saturday night one small section of 3.5-foot tall steel was welded in place.

A more significant outcome of the Saturday dig was the realization that a major safety issue had developed. Most of Sunday was spent discussing the safety issue.

For the past three months a large cavity has been forming under a rock on the south side of the dig. The face of the rock is 5 feet wide and 6 feet high and forms the south wall of the dig at the 22 to 28 foot level. The rock is now undermined about 5 feet back. The base of the rock is exposed on three sides with only the back edge disappearing in to the vertical mud wall five feet beyond the steel perimeter of the dig. A steel beam has been welded under the rock at the 28-foot level to try to prevent the front edge from falling.

The cavity forms as liquefied mud slumps under the steel between digs. Also, while the hole is being cleaned out to set new steel on the south, more mud flows in. The material slumping down behind the steel has not been firm enough to form a plug. Almost all of the material removed from the dig on Saturday and most of the material removed on the two prior digs came from behind the steel on the south, under the large rock. This process not only is inefficient but also has created a cavity under the rock that if allowed to grow will allow the rock to fall.

Considerable debate, since Saturday, has focused on the probability of the rock falling and the amount of damage it would do if it falls. I think everyone agrees that if the rock falls the consequences would range from life threatening if you were in the hole to a major setback to the dig progress if you were lucky enough to have it fall when no one was below.

If the rock falls it could fall forward if the beam below it fails or, more likely, it would fall into the cavity forming below the rock. If it fell into the cavity it could slowly slide down the mud bank and do minimal damage to the existing steel shoring or it could fall with enough momentum to crash into the dig and slam the existing steel shoring on the south against the north wall of the dig. Either scenario would leave a 5 by 6-foot opening for dirt, rock, carpet, etc to pour through.

Once again we must concentrate on shoring up, not digging down. The following plan has developed through discussions with Greg, Doug and Eddie. Your suggestions are welcome.

1) Reinforce the beam under the rock to prevent the rock from falling forward. Weld re bar hangers from the 11’ pipe to the beam.
2) Stabilize the fill behind the steel on the south to stop it from flowing under the steel shoring and into the dig. Dry mix Portland and aggregate and pour it over the 5-foot wing wall on the south side of the alcove. Three or four yards of material will be required to reach the top of the 5 foot wing wall, still 5 feet below the bottom of the rock.
3) Direct as much water as possible into the center of the dig. Lay down plastic and drainpipe on the sloped concrete fill.
4) Continue to fill the void under the large rock with rock from the bottom of the dig and with cement.

Another fix that could be used alone or in conjunction with the above would be to line the hole with a smaller diameter pipe, plug the ring shaped cavity at the bottom with concrete, and fill the reaming cavity between the two with dirt or rock. The sleeve would start at the base of the 11-foot section of 6-foot diameter pipe (16 feet down from the top) and extend 24 feet to the bottom of the existing hole. Additional shoring would be required as we move deeper. I would guess that the largest pipe that would fit between the support beam and protruding rocks would be about four foot diameter. The sleeve could also be constructed from 5’ 4” diameter tanks available at Journagan’s. The tank ends would be removed and the side slit to allow the cylinders to be drawn into a smaller diameter before being lowered into the dig.
Prior to the next dig Doug will visit Danny at Journagan’s and select steel (Tanks, re bar, and other pipe or angle for braces). Eddie will purchase pea gravel and will try to arrange for a welder. Hines will purchase Portland.

Material availability will strongly influence the fix that is used. If you can help with labor, material or money please contact me.

Rick Hines

Next digs:
Dig 28  Jan. 16 and 17
Dig 29  Feb 20 and 21

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines  (913) 897 - 4258  or  rickhines@aol.com

Dig Report
Carroll Dig 28
January 16 and 17, 1999

Recipe for A Safer Dig

Diggers:  Steve Atteberry, Greg Buckley, Jeremy Eaton, Terry DeFraties, Peddgie Heinz, Eric Fisher, Greg Fry, Barry Godsey, Rick Hines, Robert Kramer, Ron Lather, Jeff Page, Rocco Romeo, Mike Wilbanks, Regan Youngman

Chief Chef:  Peddgie Heinz

Honored Guests:  Danny & Lory Schupbach and their young daughter

Mix eleven bags of Portland cement (94 lb. each) with 6 parts gravel and one part hot water and throw in as much rock as you can find. Add a dash of quick set compound. Pour the 10,000-lb. mass, a bucket at a time, into the cavity under large rock.

As I neared the dig at about 7:45a.m. Saturday morning, I saw Greg B. pull out of the restaurant in Montreal and fall into line behind me. When we reached the dig I found that Greg had already been there Friday afternoon and dropped off his generator, welder cutting torch and a half truckload of gravel. I had decided to drive down Saturday morning because without my bed in the back of the van I only wanted to spend one night out. In addition to my normal digging gear I was loaded with ten bags of Portland, six 20-foot sticks of re-bar and a cement mixer. The bed had to go to make room for the mixer.

The hillside at the dig was covered with snow and ice. I don’t know how Greg B. managed to get his truck down the hill to unload Friday night without ending up at the bottom of the sink. We had to spread gravel and lay out carpet scrap just to walk. But, the sun was out and it looked like it would be a good weekend for a January dig.

Eddie had my key so Greg and I anxiously waited for Eddie or Ron to arrive so we could check the status of the large rock. On the prior dig it was concluded that if the cavity under the large rock continued to grow the large rock would fall sooner or later with disastrous results. Something had to be done before we continued digging deeper. Ron arrived with his key. As we raised the lid I was relieved to see that the rock had not fallen. We rigged the board to Greg’s truck and I hopped on the board for a trip down to photo document the position of the big rock and the cavity below it. As my posterior melted through the ice on the stainless steel covered board I realized I should have taken the time to cover the board with a carpet scrap. At least I remembered to grab some heat packs to wrap around the camera to prevent it
from fogging in the warm humid cave air. The rock had not moved. A groove chipped in the upper left corner of the rock still closely matched the edge of the steel on the east. The lower right corner of the rock, where it meets the bedrock on the west also looked unchanged. Once in the alcove on the west side of the dig I could look over the steel wing wall on the south side of the alcove and look into the cavity under the rock. The cavity looked about the same as it had a month earlier. The mud at the back of the cavity had slumped down leaving a 2-inch gap below the rock indicating that the rock was supported farther back and was not pushing the mud down. Some material had washed down behind the lowest section of steel on the south forming a tapered plug of mud about 5 feet deep and 2 to 3 feet wide at the top.

The first order of business was to reinforce the beam under the big rock to ensure that it would not fail and let the rock tip into the dig. Three 20-foot lengths of re-bar were welded to each section of steel above the beam and finally to the 11 foot long pipe. The 11-foot section of 6 foot diameter pipe is not going to move. The original connections of the beam to the steel on the east and the bedrock on the west still looked good.

Most of the crew had arrived by the time Greg B. finished welding. The problem now appeared to be a shortage of gravel. The load Greg B. brought would allow us to get started but we would need much more to fill the void. Three backup plans to get gravel had apparently failed. One plan involved Greg Fry. Earlier in the week I called Greg F. to ask if there were any close sources of gravel. Greg F. volunteered to try to have a load delivered to his driveway for us to use. But on Wednesday Greg F. called to say his source probably couldn’t deliver by Saturday. Before I could come up with a backup plan for the backup plans Greg F. arrived and announced he had 6 tons of river gravel in his drive. Greg F. also provided four bags of Portland he had been storing from a prior dig.

We mixed and poured cement until well past dark. We filled to the top of steel wing wall and then added a 2 by 12 to the top of the steel and continued pouring. By the time we quit for dinner we had filled to the top of the 2 by 12 and had cement within three feet of the base of the rock. The concrete plug was 6 or 7 feet deep and extended five feet back from the steel.

We enjoyed a Mexican feast prepared by Peddigie, the CCC Chief Chef. After dinner we sat around a roaring campfire and got to know our two first time diggers Mike Wilbanks and Rocco Romeo. Rocco and Mike are two hard working conscientious diggers. I hope we see more of them. Rocco called for a round of applause for each digger that spent time down hole, then for each member of the cement crew, then for Peddigie and then for Rocco for pulling rope, and then for Rocco for hauling rock, and then for Rocco for helping in anyway he could. Rocco can entertain at our campfire anytime.

Eddie arrived Sunday morning (only one day late) with an eight foot long by 4-foot 8-inch diameter tank in the bed of his truck. Danny at Journagan’s in Springfield provided the scrap tank. Eddie didn’t come to work, just to steal part of my crew for a Sunday cave trip. The tank will be cut up and used as needed for shoring as we go deeper.

Following a big breakfast prepared by Peddigie and her assistant Ron, we went back to work. One crew left for another load of gravel and the rest of us starting preparing for more concrete. To get more concrete behind the steel I cut a 2 foot square hole at the top of the steel just below the big rock. The crew that lowered me into the hole and pulled me out suggested that I should not have gone back for seconds on the pancakes. Barry went down for his first trip into the hole. He nailed plywood to the 2 by 12 to finish plugging the opening between the cavity under the rock and the alcove. Barry poured and pushed cement until the cement contacted the base of the rock at the back of the cavity.

Sometime Sunday afternoon the cement crew figured out that I wasn’t going to quit until we ran out of Portland. They later admitted to increasing the ratio of Portland in the mix just to get to go home earlier. A light rain actually shut down the cement operation about 2:00pm even though we still had 3 bags of Portland.
One last surprise. We had cleaned up and were ready to head home when we realized we still needed to unload the tank from Eddie’s truck so he could pick it up after his cave trip. We chained the 5 to 1 block and tackle to a large oak, backed the truck under, raised the tank and drove the truck out (Not quite as simple as it sounds).

A special thanks to Danny and Lory Schupbach for coming by Sunday to check out the dig. Their interest and support is greatly appreciated. Thanks also to Greg Fry for saving the weekend with six tons of gravel.

As you drive across Greg’s pasture next month please remember to avoid driving in the ruts made by the prior traffic. During the winter, when the ground is soft and the grass is not growing drive on a new path each trip. During the summer when the ground is firm and the grass is growing follow the path established by prior traffic to minimize damage to the growing grass.

Expenses this month were $87.44 for Portland and re-bar, $25 for gravel and $50 for cutting gas and welding supplies. If you would like to support the project, and can’t provide labor, please send a check to our treasurer,

Wayne Burnett
8322 Grant Ave.
Overland Park KS 66212

Report submitted by Rick Hines

Next digs:
Dig 29  Feb 20 and 21
Dig 30  Mar 20 and 21
Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines (913) 897 - 4258 or rickhines@aol.com

Dig Report
Carroll Dig 29
February 20 and 21, 1999

Three More Feet of Steel

Diggers: Bernhard Arnold, Greg Buckley, Jeremy Eaton, Greg Fry, Tom Grant, Carolyn Hartley, Mike Hartley, Rick Hines, Martha Hoegler, Tim McClain, Ed Simmons

Visitors: Too Many

Last month we poured concrete to fill a cavity that formed behind the support steel and under a large rock. To pour the last of the concrete we cut an access hole in the support steel just under the large rock. Last month we found clean washed rock at the bottom. This month we found about two feet of mud and rock at the bottom. The access hole we cut last month had allowed mud to wash in from above. This time we plugged the access hole before leaving. With the access hole plugged the remaining cavity below and at the side of the large rock will back fill with each rain.

Just inside the access hole we found several soda straws that had grown to an inch and a half in length since last month. They were growing at the base of an old concrete patch put in last year. On the steel below the concrete we poured last months a flowstone formation somewhat like a rimstone dam is forming.

Saturday was cold with a light snow. The snow fell as perfect six-point stars up to 3/8 inch across. As we worked in the snow we used two-way radios for the first time to improve communications between
the truck driver and a person at the top of the hole. The radios were also tested from the bottom of the hole to the pull truck. They worked fine but most of the time the digger was too busy and too muddy to operate a radio. I’m not sure the radios worked any better than hand signals but we liked having a toy to play with. We pushed the bottom down to about 43 feet Saturday. Saturday night most of us accepted Eddie’s invitation to experience his new sauna. Wow! my toes got warm for the first time that day.

The weather improved Sunday. The bright sun soon melted away the inch of snow that had accumulated overnight. We started preparing the hole to set more steel. We used a sledgehammer and a jackhammer to remove rock protruding into the hole. Greg B. and Mike welded one of the last pieces of 5/16” steel into place while we cut a three-foot tall band from an old water tank donated by Danny Schupbach (Journagan’s). The water tank is only 1/8” thick which made it easier to cut and handle. Since it is thinner we will need to do more overlapping and bracing. A come-a-long pulled the C-shaped band into a cylinder, small enough to be lowered into the hole. After welding one end in place a hydraulic jack was used to push the new band into place for additional welding. Unfortunately the tip on Greg’s welder fouled before the job was finished. We cross-brace the free end of the band before packing up.

On Sunday, we had too many visitors! I hate to discourage interest in the dig but we must try to minimize the damage to Greg Fry’s pasture. The ground is soft and we are cutting ruts. If you are not there to dig do not drive through the gate. If you come to visit park in Greg Fry’s drive (out of the way) and walk in. When you do come to dig try to car pool. We will be purchasing a truckload of gravel ($90) this month to fill the ruts at the gate. Remember, in the winter, do not follow in the path of prior drivers; drive across the grass.

Report submitted by Rick Hines

Next digs:        Dig 30    Mar 20 and 21
                 Dig 31    Apr 17 and 18

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines     (913) 897 - 4258     or     rickhines@aol.com

Dig Report
Carroll Dig 30
March 20 and 21, 1999

Big Rocks

Diggers: Bernhard Arnold, Greg Buckley, Greg Fry, Rick Hines, Martha Hoegler, Andy Isbell, Ron Lather, Tim McClain, Ed Simmons, Aaron White

Depth: 41 feet to the lowest steel, 45 feet to the lowest point

The nature of the dig changed dramatically this month. We have now moved from mud and gravel with the occasional boulder to just large boulders. About a foot below the steel the dig starts pinching off to a crack between two large boulders. We chipped away at the crack with an electric jackhammer. The lowest point in the V-shaped crack is 45 feet below the top of the steel. We hope the voids between the rocks will also be large.

Last month we were unable to complete welding the lowest steel in place because Greg Buckley’s welder jammed. We wedged the loose half of the C-shaped band into place with 4 by 4s before heading home. This month we found the unwelded end of the C-shaped band displaced a few inches from the steel above. It had been pushed out by material washing down from above. Part of the problem is due to using 1/8” steel, which is all we currently have available. To properly attach the steel it was necessary to
cut the loose end off and dig out the material flowing down from above. The steel that had been removed was then repositioned and welded into place.

As we go deeper the potential damage from falling material increases. Recognizing this fact we instituted a few rules. We will have a least two people topside to guide and dump the load before raising the load. Secondly, the digger will take shelter in a safety alcove, out of alignment with the main shaft, while a load is being pulled up. The safe alcove area will be maintained at about the same level as the bottom of the dig for easy access.

Currently the bottom of the alcove is at the same level as the steel in the main shaft. We cut and welded steel in place to form up the sides of the alcove. The opening to the alcove is about 18 inches wide.

In addition to trying to find a path between the boulders at the bottom of the dig we will also take a second look at base of the bedrock at the top of the alcove. We may tunnel under the bedrock a short distance trying to find the point where the bedrock turns down. I assume the soft and hopefully airy path to the cave will be between the bedrock and the breakdown.

Expenses for the month included $130 for gravel dumped at the gate to fill large ruts that were forming. Thanks to Eddie for doing a nice job of spreading the gravel Friday before we arrived.

Report submitted by Rick Hines

Next digs:  
Dig 31  Apr 17 and 18  
Dig 32  May 22 and 23  
CCC Meeting #6  Apr 24 at Noon at Ha Ha Tonka, Post Office Shelter House, lunch provided

Contact Hines to sign up for digs and meeting. Maps available on request.
Rick Hines  (913) 897 - 4258  or  rickhines@aol.com

Dig Report  
Carroll Dig 31  
April 17 and 18, 1999

**Eight Feet Horizontal**

Diggers: Bernhard Arnold, Greg Buckley, Jeremy Eaton, Mike Hartley, Carolyn Hartley, Greg Fry, Rick Hines, Martha Hoegler, Ron Lather, Tim McClain, Ed Simmons, Ryan Thompson

Depth:  41 feet to the lowest steel, 45 feet to the lowest point (no change from last month)

The rain bucket read 3.5” since last month.

We found clean white rock at the bottom. For the first time, more material had washed out than had washed in!

Without a large jackhammer or explosive we were unable to move deeper.

One interesting area we pasted on the way down is at about the 30-foot level at the top of the alcove. The only bedrock exposed in the dig turns horizontal at that level and forms the ceiling of the alcove. We dug a horizontal shaft about 6 feet tall by 2 to 3 feet wide, 8 feet beyond the 6-foot diameter vertical shaft. Two diggers can work in the horizontal shaft. The left side, bottom, and end of the shaft consisted of clay and small rocks. The ceiling consisted of a hard solid rock with small grains of quartz. The right wall consists of a soft sandy layer. The bedrock forming the ceiling is at least 15 feet thick. The soft sandy rock on the right is at least 7 feet thick.
Before departing Sunday the left side of the tunnel was shored with a 4 by 7-foot section of steel cross-braced to the bedrock on the right. Plywood shoring was reinstalled between the steel and the bottom of the dig (41 to 45 foot level).

CCC Meeting #6  April 24 at Noon at Ha Ha Tonka, Post Office Shelter House
Lunch and a cave trip will be provided.

Call to sign up for a dig
Dig 32  May 22 and 23  Greg Buckley will organize (417 282 5395 or Buckln@d todays-tech.com)
Dig 33  June 19 and 20  Rick Hines  (913 897 4258 or rickhines@aol.com)

Report submitted by Rick Hines

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CCC MEETING #6 April 24, 1999
Ha Ha Tonka State Park
Attendees: Greg Buckley, Jeremy Eaton, Kay Hines, Rick Hines, Martha Hoegler, Andy Isbell, Ron Lather, Lorely Lather, Jeff Page

The following list of 18 items was given to attendees for discussions at the meeting. (Discussion, comments and actions items from the meeting are shown in parentheses)

1) Safety
   Hardhat (Diggers must be in alcove before load is raised. Hines read an email from Bill Hays, attorney, on safety issues and potential liability. Part of Bill's comments follows.
   "The release really speaks to the overall project and how it is being undertaken. It is not protection against people who don't use ordinary care. It certainly wouldn't protect anyone for harm they might cause if, for example, they participated in the dig while intoxicated. By the same token, it will offer little protection against any other obvious carelessness on the dig site. In my opinion, working above someone who refuses to wear a hardhat is careless. Each individual involved in the dig should make a personal decision as to whether or not they want to expose themselves to potential liability for the death or serious injury of a fellow dig participant, just to accommodate someone else's reckless attitude.")
   Pull system (Buckley is studying options)
   New Board (Mike Hartley is building)
   New Safety Committee chairman (group responsibility)
   Minimum crew of two at top of hole before raising load (yes)
2) 501 c3 do we want to do this (yes - Hines will pursue)
3) New Officers -- secretary - safety (Not needed)
4) dues (not yet)
5) newsletter charge (not yet, if OK with Bill Pfantz who is currently donating postage)
6) bridge steel (Hines will pursue)
7) powered rope puller (Buckley is studying options)
8) gravel at dig for concrete. (Buckley will bring a load to dig)
9) Lyle and Christy Carroll (Land owners on west to be contacted about pond)
10) Horizontal or vertical (both)
11) Attendance at dig (All must sign)
12) Rumor control (call Hines if you have a problem)
13) need steel - big and small (Andy Isbell will try to obtain small steel at work. Hines will help and provide trailer)
14) 2' ring (Jerome Eaton will arrange for loading at Eddie's and transportation to dig. And additional 2-feet of 6-foot diameter steel will make it safer for topside workers, give us more room to backfill and get us well above the pond bottom.)
15) open or secret. (Open, the web page is for all to read)
16) Next CCC meeting on a Sunday (yes)
17) Next dig May 22 & 23 Buckley
18) June dig -- third weekend -- June 19 & 20
(Ron suggested that we should quit digging sooner on Sunday and allow more

time for shoring to prevent late departures that have become too common. All

agreed.)

(Andy asked to be added to mail list)

Thanks to Ron and Lorely for donating the $30 necessary to reserve the

shelter house.

Before the meeting we enjoyed horseshoes and lunch. Following the meeting we

explored Island Cave. The ranger gave us a map of the cave with the gate

lock combination written on the back. After entering we locked the gate

behind us as the ranger suggested. We left the paper work on a large rock 6

feet inside the gate. While we were exploring we heard kids around the gate.

When we returned to the locked gate we found our map and combination gone.

In its place was a long stick the kids had used to drag out the paperwork.

We were relieved to learn that Jeff remembered the combination.

Report submitted by Rick Hines, 4/24/99

Dig Report
Carroll Dig 32
May 22 and 23, 1999

Diggers: Mike and Carolyn, Eric Fisher, Dave Fisher, Martha, Pedgie,
Tim Bernard, Jeff

Report thanks to Greg Buckley:

When I arrived sat morning Mike and Carolyn

were there with Eric Fisher. Eric's dad, "Dave" came to visit from

Indiana, and turned out to be a big help. Martha, Pegie, Tim, Bernard

and Jeff

arrived after noon, therefore a late start. Eric supplied an excellent

vinison roast, which Martha and Pedgie turned into a great stew. As far

as

the dig goes, we dug back to the north side approx. 5ft and down

approx. 4ft, below the large rock on the north half of the hole. It

appears

that the rock is only 2.5ft thick, but the length is still undetermined.

Although there is ample room to work behind the rock, there is

a probability it's going to be removed. Sunday morning was a late

start

as well, late breakfast in town, and we got started about 10am {of
course I was

ready much earlier}. We finished our shoring 2:30PM Everyone took
an early leave.

Thanks to all!

Dig Report
Carroll Dig 33
June 20 and 21, 1999

Fifty Feet and Air

Diggers: Bernhard Arnold, Greg Buckley, Terry DeFraties, Jeremy Eaton, Andy Free, Greg Fry, Marty Griffin, Mike Hartley, Carolyn Hartley, Rick Hines, Dan Isbell, Tim McClain

Depth: 46 feet to base of lowest horizontal dig, 50 feet to lowest visible point in blowing air hole.

Preparation for the dig started Thursday afternoon when Terry DeFraties, Mike Hartley and Wayne Burnett met me in Greenwood Mo. Pyramid Contractors Inc. (Mark Holmes) donated a scrap 9-foot diameter galvanized corrugated culvert. Six-foot wide sections were cut from the culvert and loaded on Terry’s trailer. Terry could not make it to the dig until Sunday so I pulled the trailer home and then to the dig Saturday morning.

In spite of two 3-inch rains that Greg Fry told us about, we found only a few cubic feet of washed in mud at the base of the lowest horizontal dig.

The digging effort this month concentrated on lowering and expanding the lowest side branch. It now extends nine feet west from the main shaft with the base at 46 feet (all vertical measurements referenced to the top of the 6-foot diameter pipe lining the main shaft). The right wall is bedrock that is flaring out to the north. The ceiling is horizontal bedrock about 14 feet overhead. The left wall is mud and rock fill. The left wall is vertical between 46 and 38 feet and then steps to the south or left to the left wall of the upper horizontal dig. The upper horizontal dig extends from 38 feet to the base of the horizontal bedrock at 32 feet. The two levels of the horizontal dig share the same sloping bedrock wall on the north.

As we dug down and back in the lower horizontal shaft we found a 6 inch opening against the bed rock on the north. Before leaving we widened the air hole and could see loose clean rock at about 50 feet. Saturday the hole was blowing. Sunday, a strong flow was moving into the cave.

Future digs will follow the air. Other options include following the intersection of the ceiling and the bedrock wall to the west hoping to reach air filled passage or going north from the base of the main shaft about 4 feet to bedrock wall. Going north would require removing some existing steel and shoring overhead until we reached the bedrock. Additional steel and welding equipment will need to be on hand before the northern option is considered.

A special thanks to first timer digger Andy Free. Andy was a big help and I hope we see him often.

We still need ¼ inch or thicker steel plate or large diameter pipe. Plywood for temporary shoring is also needed. If you can help in any way please let me know.

Digs are scheduled the third weekend of each month.

Dig 34 July 17 and 18
Dig 35 Aug. 21 and 22
Dig Report
Carroll Dig 34
July 17 and 18, 1999

**Breakthrough !!! Eighty feet of virgin cave and strong air flow**


Depth: 78 feet

Jim Hedrick and I were the first in the hole. After removing the few loads of mud that had washed in during the past month we noticed a small opening at the west end of the lower horizontal passage. Jim's light revealed a floor about 15 feet below. Jim was the only one in the crew optimistic enough to bring climbing gear. While Jim road the board topside to retrieve his climbing gear I open the hole to the room below. The room below seemed spacious enough to except the rock and mud I pushed in with the pry bar. A very strong flow of air was moving into the room below. The volume of air moving indicates that we are connected to a large cave system.

Jim returned and rappelled through the opening into the room below. He slid down a 15 ft. high mud and gravel bank into a 20 ft. wide room that extended 30 feet to the north. We soon placed a ladder through the opening to facilitate access for those of us without climbing gear. We examine the room for exits and found the air to be moving through a very small stream passage to the west. After a little digging and probing with the pry bar Andy Free was able to open a hole to a second room.

The second room extended basically west or northwest for about 50 feet. The floor of the room consisted of loose breakdown. Just inside the room we could see a void between the rocks extending down six or eight feet. As we move northwest through the passage we climbed over one breakdown pile and then over a second. We tended up in elevation approximately 10 feet as we move toward the end of the passage. Even though the air velocity was high at the two-foot diameter opening into the room it was difficult to track the airflow in the room. A smoke test indicated air movement to the northwest toward the back of the room. We could not locate where the air was exiting the passage. Next month we will have a more sensitive anemometer to follow the air.

On Sunday Greg Buckley, Marty, and Ron removed a few rocks to open up the hole just inside the second room. The two-foot diameter hole spirals down for at least 15 feet to reach the lowest elevation obtained, approximately 78 feet below the top of the steel pipe. That puts us 57 feet above the estimated Thunder River water level and very near the elevation of known cave passage just beyond the dig. We are close!

We need steel plate for shoring the south side of the horizontal passage. If you can help with steel or labor for the next dig please call or email.

Digs are scheduled the third weekend of each month.

Dig 35  Aug. 21 and 22
Dig 36  Sept. 18 and 19

Report submitted by Rick Hines.  (913 897 4258 or rickhines@aol.com)
Dig Report 35  
Aug. 21 and 22, 1999  
Submitted by Bryon Carmoney

SHORING COMPLETE


When Rick and I first arrived at around 8:45am no one was at the dig site. This was rather alarming. We headed back into town to give Eddie Simmons a call and see if anyone was coming down that he might know of. While we were there Andy Isbell drove by so we headed back to the site. After a short discussion of what we should do we decided to go ahead and give it a try. A few of us had to go see the void space made on the last dig and went in to see it. There is quite a bit of loose breakdown and quite a few large rocks. This made me a little nervous, but that is why we were there to help shore up the rock bank and make it safe to continue. While we were down there, Andy Free and Greg Fry arrived so everything was starting to take shape so the dig could continue.

Rick, Jeff  (my future Brother-in-law), and I stayed in the hole for most of the day. We cut four pieces of steel. The first was a mistake but it turned out rather well. We used it to shore up the back wall. The other pieces were used to form sort of a tunnel over the hole that leads down into the new cave passage.

We had to do a lot of digging to make the pieces fit right and this took a great deal of time. There is very little room to work with the steal in place so digging was rather difficult. We enlarged the hole that leads into the cave and also pushed all the dirt into the cave. This brought on a rather lengthy discussion but we all decided that it was the best thing to do for the moment.

Sunday morning Rick took us on a grand tour of the place. We got to see the natural entrance to Carroll Cave and he also showed us all the other pits and homeowners he spoke with while researching the current site. We were waiting for an air meter to measure the flow of the air so we would know where to dig next, but it never arrived.

By noon Sunday we finished the shoring job and started picking up. Right before we left Greg Fry and his neighbor Bruce came down to visit and see how we were doing. Ron Lather also showed up with Muddy and we just passed the time until about three o’clock in the afternoon. We said our goodbyes and then headed home.

I must say that for my first dig I really enjoyed myself. The site has a great deal of room for many campsites and a great big fire ring. If you can make the time to see the dig and help out I would strongly encourage you to do it.

Submitted by Bryon Carmoney

Addition by Rick Hines  --  Progress this month consisted of shoring the horizontal passage that leads from the 6-foot diameter vertical shaft to the entrance of the small cave. Corrugated steel now arches from the left side of the horizontal passage and leans against the bedrock on he right. The steel and bedrock form a 6 foot tall 8 foot long passage.

Digs are scheduled the third weekend of each month.

Dig 36  Sept. 18 and 19
Dig 37  Oct. 16 and 17
Contact Rick Hines  (913 897 4258 or rickhines@aol.com)

Dig Report
Carroll Dig 36
Sept. 18 and 19, 1999

Where To Dig?

Diggers:  Bernhard Arnold, Terry DeFraties, Eric Fisher, Gerry Gattenby, Robert Gattenby, Mike Hartley, Jim Hedrick, Roger Heiser, Rick Hines, Andy Isbell, Ron Lather, Matt Liedman, Tim McClain, Jeff Page, Bill Pfantz

Visitors:  Greg Fry, Carolyn Hartley, Martha Hoegler

Special thanks to first time digger Bill Pfantz (long time supporter) and first time diggers Roger Heiser and Matt Liedman. Roger and Matt came from Illinois with Jim Hedrick. Thanks also to Kevin Berdak for the loan of his anemometer.

Before removing the steel lid from the top of the six-foot pipe, 9:00 Saturday morning, we measured the air velocity at small openings in the lid – 250 feet per minute and blowing out. The surface air temperature was 70 F and the air coming from the dig was 62 F. Air coming out was a bit of a surprise since for the last several months, since connecting to the small cave and getting strong airflow, the flow had been consistently into the cave.

**Confusing airflow:** Terry and I carried the anemometer to the back of the small cave taking readings along the way. 120 FPM at the 45-foot level at the four square foot opening to the cave below. 60 FPM at the opening in to the second room. 0 FPM at the top of the deep wormhole just inside the second room. As we moved to the back of the second room we noticed that it was getting cooler even before taking a reading that confirmed a cool 59.6 F. The fastest flow we could find was 90 FPM between the rocks at the small pit at the last survey point at the back of the second room. No, 40 FPM in the pit. No, 0 FPM in the pit. We started to question the accuracy of the meter. As we watch the reading climbed to 90 and then fell to zero again. On the way out we continued to observe velocity oscillations with a period of 2 or 3 minutes. Also, on the way out the readings were about half of what they were on the way in. What is going on?

With no clear indication where to dig, and a larger crew than normal we started digging everywhere.

**Digging at the top of the horizontal passage:** Terry and Ron extended the top of the horizontal passage to thr west. They followed the bedrock ceiling at about the 30-foot level and the bedrock wall on the north. Digging into the vertical gravel and mud face is relatively easy and the excavated material can be dropped on the roof of the corrugated steel tunnel below. No breakthroughs there this month but the gravel and mud filled passage continues.

**Work at the intersection of the 6-foot vertical pipe and the horizontal tunnel:**  Tim lowered the cutting torch to Gerry. Gerry cut the 6-foot pipe to match the arched corrugated metal on the south side of the tunnel. The steel on the north side at the bottom of the 6-foot pipe was also removed to prepare for improvements in shoring. Matt, Roger and Jim dug dirt and rock from behind the 6-foot pipe on the north so a second corrugated steel arched could be installed between the bedrock on the northwest and the steel pipe. The improved shoring will reduce the material washed into the cave. Excavating back to bedrock also gave us a chance to look for other possible areas to dig. The excavated material was pushed down into the first cave room.

**Moving material at the base of the iron ladder in the first cave room:**  The east wall of the first cave room is a very soft sandstone where it meets the mud bank on the south. Since the ease wall did not look
like anything we wanted to dig under we started piling dirt from above against that wall. This may also help support a large slab of rock that forms the ceiling of the first room.

**Digging at the back of the second room:** Since most of the airflow was at the pit at the back of the second room, that is where most of the digging was done. Bill and Eric were digging there until after 9:00 Saturday night. Digging there lowered the pit about 5 feet. On Sunday, after removing a few of the larger rocks a 5-foot bar could be poked down at the base of the pit until only 6 inches of the bar was visible. The strong airflow and the close proximity of the bedrock wall on the west make this a promising spot for future work. On the negative side, we are starting to run out of convenient places to dump the excavated material.

**Digging at the base of the wormhole just inside the second room:** Digging here was tempting because it is 15 feet deeper than any other opening so far. On the negative side there is hardly room to stand, let alone dig, there is little air flow, no place to put the dirt and if anyone above knocks loose a rock it tends to funnel down the wormhole. Mike did a little digging at the base of the wormhole, and “felt air on his face”. We well have to get the anemometer down there next month.

**Less confusing airflow:** After lunch on Saturday a second pass with the anemometer found higher and more consistent airflow: 300 FPM between the rocks at the back of the second room, 100 FPM where the breakdown meets the west wall at the back of the second room, 120 FPM at the opening between the first and the second room, and over 340 FPM at the top of the steel ladder (with my body plugging half the opening). It was then that I realized the air was sucking into the cave! At the surface we closed the lid and measured 300 FPM at the chain opening and Ron’s cigarette confirmed the fact that the cave was sucking air in. The flow had reversed in just a few hours, which helps explain the confusing readings on the first trip.

**What drives the airflow:** Barometric pressure changes or temperature difference between cave and surface? Barometric pressure can change 1% or roughly 0.15 psi in a matter of minutes when a front passes through. The differential pressure between two columns of air 130 feet tall (entrance of Carroll to top of pipe) with one column at 59 F (cave temperature) and the other at 70 F (temperature Saturday morning) is 0.0014 psi. This calculation leads me to believe temperature is a minor factor. On the other hand the sink seems to blow out in the winter and suck in during the summer. Also, estimating the volume of Carroll to be 10.6 million cubic feet and the exit area at the entrance water passage and at dig to total 16 square feet and assuming a velocity of 200 FPM leads to a calculation of 38 minutes to move a volume of air equal to 1% of the cave volume. Therefore rapid changes in barometric pressure could drive airflow but during periods of a steady barometer temperature difference could be the driving factor.

Please email me if you can help explain what drives the airflow in a Carroll. Perhaps a school class would like to instrument the sink/cave and collect data to help explain the process.

**Sunday Rain:** We worked Sunday morning in a light rain, cutting and placing steel to complete the shoring. After closing the lid we found air moving in through the small holes at 150 FPM. We were on the road by early afternoon.

**Wanted:** We need a ladder, my 36’ ladder in a 42’ hole doesn’t quite get it.

Digs are scheduled the third weekend of each month.

**Meeting**

**October 9** at noon at Truman Lake State Park.
Lunch provided, Boat ride weather permitting
(Please let me know if you will attend)

**Dig 37**  
October 16-17

**Dig 38**  
November 20-21

Report submitted by Rick Hines.  (913 897 4258 or rickhines@aol.com)
No Easy Way In

Diggers: Tom Grant, Mike Hartley, Carolyn Hartley, Rick Hines, Peddgie Heinz, Andy Isbell, Tim McClain
Visitors: Greg Buckley, Doug Feakes, Greg Fry, Andy Free, Marty Griffin, Bruce, Jennifer

We spent the weekend probing the two cave rooms below the dig for an easy entrance into Carroll. None was found. We dug at the back of the second room, following the airflow under the bedrock wall on the northwest. We probed at the bottom of the wormhole at about the 75-foot level. I even cut a 2-foot opening through the 6-foot pipe at the 32-foot level to look for the opening where bats emerged in December 1997. We will continue to look for the easy way for another dig or two.

If we are unable to break into another cave passage from the existing rooms we may be forced to abandon the two cave rooms and start extending the vertical shaft again. When the rains come the dig will funnel water into the first cave room. The water will erode the 15-foot high mud and gravel bank that we climb down to get into the room. The mud and water will flow into the second room and down the wormhole. Some think the water will wash open a path to Carroll; others think the wormhole will be filled.

If we are to continue dropping the vertical shaft we will need to construct an overhead derrick and a power winch system.

We confirmed that airflow between the dig and the cave is controlled primarily by temperature. When the outside temperature is above cave temperature (approximately 59F) air is sucked into the cave. When the outside temperature is below cave temperature air blows out of the sink. Saturday morning, with the outside air temperature near 70, air was being sucked in through the 2” chain holes in the lid at 275 feet per minute. Early Sunday morning, with the air temperature at 43, the cave was blowing at 300 FPM. After breakfast the temperature climbed to 52 and the air was moving out at 75 FPM.

Thanks again to Kevin Berdak for the loan of his anemometer. Thanks to Carolyn Hartley for the excellent chili dinner Saturday. Thanks also to Gerry Gattenby for the donation of a 10-foot steel ladder.

Digs are scheduled the third weekend of each month.

Dig 38 November 20-21
Dig 39 December 18-19

Report submitted by Rick Hines. (913 897 4258 or rickhines@aol.com)
Visitors: Greg Fry, Rick

Greg Fry and his friend Rick walked up as I was finishing taking velocity readings Saturday morning. Strong air was flowing from the 2'' diameter chain holes: strong velocity and strong smell. Greg speculated that we chained down the lid last month before the last digger was out.

The following readings were taken at one of the two 2'' chain holes in the lid Saturday morning. Four rabbit size holes are also exposed near the top of the exposed 6-foot diameter pipe for a total opening of about 30 square inches with the lid in place.

<table>
<thead>
<tr>
<th>Time</th>
<th>Velocity (ft/min)</th>
<th>Outside Air Temp.</th>
<th>Cave Air Temp.</th>
<th>Lid slid to the side to open additional area (inch sq.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:20am</td>
<td>635</td>
<td>43</td>
<td>56.7</td>
<td>0</td>
</tr>
<tr>
<td>8:32am</td>
<td>604</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>9:04am</td>
<td>622</td>
<td>46</td>
<td></td>
<td>0</td>
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<td></td>
<td>484</td>
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<td>30</td>
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<td></td>
<td>364</td>
<td></td>
<td></td>
<td>70</td>
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<td></td>
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<td></td>
<td>312</td>
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<td></td>
<td>240</td>
<td></td>
<td></td>
<td>456</td>
</tr>
<tr>
<td>9:17am</td>
<td>583</td>
<td>47.5</td>
<td>57.3</td>
<td>0</td>
</tr>
</tbody>
</table>

After removing the lid we lowered a bucket and a plastic trash bag before I went down. I found a very ripe rabbit at the bottom of the shaft. After scooping it into the bag and sealing the bag I noticed no improvement in the air quality. I soon found a second rabbit a few feet into the horizontal side passage. After sealing the second bunny and most of the maggots in the bag the air quality did start to improve.

I started down the ladder into the first cave room. At the top of the ladder the air velocity was 400 feet per minute, and thankfully it was blowing out. The only air flowing into the first cave room was coming from the second room. As last month, the only significant air in the second room was coming from the openings in the fill against the far bedrock wall. I measured 500 feet per minute through several small openings between the rocks and the wall.

As I checked the two rooms for airflow I also looked for any change in the structure in the last month. Although on a geological time scale the rooms are obviously in the process on collapsing, I could find no sign of movement since we first entered the rooms in July.

We continued digging down against the bedrock wall. With each rock removed from the bottom of the 5-foot deep hole Sunday morning we would open a new void blowing very strong air. Jim commented that if it would blow a little harder we would not have to dig. We quit around noon Sunday because the nearly vertical gravel bank opposite the bedrock wall needs to be shored before we go deeper.

Before quitting Bernhard opened a hole near the base of the bedrock wall large enough for him to stick his head in. Although he could not see any large voids beyond we did measure 730 feet per minute (8.3 miles per hour) blowing out of the foot square opening.

After closing the lid I measured 600 feet per minute blowing out of the chain hole with an outside air temperature of 64. I had been predicting all weekend that when the outside air temperature exceeded the cave temperature the cave would start sucking air in. Wrong again! A falling barometer must have been the driving force at that point.

To shore the dig in the second cave room we need to build or obtain several screw jacks to expand between shoring and the bedrock wall. If anyone can help provide large (> 1 inch) threaded rod or screw jacks please call.

Thanks again to Kevin Berdak for the loan of his anemometer. We are following the air and we could not do it with out a sensitive meter. Carolyn provided a large pot of stew for dinner Saturday that we topped
off with cinnamon and caramel rolls that Peddgie baked in the CCC oven. Thanks also to Peddgie and Carolyn for a generous and tasty breakfast Sunday morning. Robert gets the prize for the most relaxed digger. He went to sleep while digging in the second cave room.

For old dig reports and photos visit www.carrollcave.org.

Digs are scheduled the third weekend of each month.

Dig 39 December 18-19
Dig 40 January 15-16

Report submitted by Rick Hines. (913 897 4258 or rickhines@aol.com)

Dig Report
Carroll Dig 39
December 18, 1999

Working on Plan B

Diggers: Terry DeFraties, Andy Free, Greg Fry, Rick Hines, Ron Lather, Tim McClain, Kathy Sumner, Tom Sumner,

On Friday Terry DeFraties, Jeff Page, Dan Isbell and I met at Pyramid Contractors in Olathe to load steel for shoring. Two 6-foot long by 30-inch diameter sections of culverts and a 4-foot by 24-inch section were cut and loaded. Approximately 12 sections of 1.5-inch pipe were cut for building screw jacks. We thanked Mark Holmes (Pyramid Contractors) before leaving.

Ron Lather called before the dig to tell me he has located a 7-foot diameter 0.25-inch wall by 30-foot long tank near Camdenton that we probably can have.

Before removing the lid Saturday morning we measured 730 feet per minute at the chain holes with an outside air temp of 39F. Most readings in the cave were similar to last month with two exceptions. I measured 40 feet per minute at the top lip of the wormhole where the flow had been near zero in the past. The hole where we dug last month, against the bedrock wall at the back of the second room, was blowing 450 feet per minute. The reduction from 730 feet per minute last month was not surprising due to the amount of material kicked in last month as we left and as I entered this month.

After taking the velocity readings I measured to determine the length of screw jacks needed to brace a rock above where we dug, to the bedrock wall. On the way out I measured the area where we planned to place the culvert. We have 18 to 24 inches for a 30-inch culvert.

We built two screw jacks from 1-1/8 inch threaded rod and pipe. We went into the cave to install the jacks and to try to develop a plan for the culvert and addition shoring on the back dig wall. Terry and I tightened the screw jacks into place. I think they will work well. As we set the jacks Andy cleared the path back to the first cave room. Andy moved and rearranged rocks for safety. When he moved one rock a larger one slid down a few inches. Rocks moving in this unstable environment got everyone’s attention and we started rethinking our plans.

We discussed the options for additional shoring. The lose gravel bank where we are digging against the back bedrock wall must be shored before additional digging. Curved corrugated sections from the 9-foot culvert would not only support the lose bank but would provide protection from the slab overhead and
provide a place for dirt excavated below. The only problem was how to get the large sections of steel to the back wall. Three 18-inch wide by 6-foot tall sections might fit through.

As we exited the cave Tim, Terry and I discussed our options. 1) Moving large sections of steel would be a tight fit and would require some digging and bumping of rock the looks unstable. This did not sound like a good plan based on Andy’s experience a few minutes earlier. 2) Tim wants to dig straight down from the 42-foot shaft while lowering the floor of a side passage. Digging down with a deep side passage to a bedrock wall will require removal of large volume of dirt and much shoring. 3) Shoring from the existing side passage with culvert and then bracing and shoring to stabilize a path to the back bedrock wall is somewhat appealing but if the culvert goes in first the size of material the we will be able to get to the second room will be limited.

When we reached the surface the discussion continued. When the spring rains come the dirt bank into the first cave room will tend to wash open making it easier to get the culvert in. We should be able to get more culvert from Pyramid making it possible to place culvert from the horizontal side passage to the second cave room. We may be able to slide 18-inch wide sections of the 9-foot culvert in first for use against the back wall of the second room.

Another option would be to move to a location over the T-Junction (also located on Fry/Danuser property), and go 135 feet straight down. This could be done by drilling 3 small holes on a 3-foot diameter circle to the cave below, blasting to fracture the rock between the holes, and then hauling the rock out. Alternatively we could drill a 2-foot diameter hole. Drilling a 2-foot diameter hole would be the most attractive if a drilling company would donate their services.

A large donation would be more likely if the CCC could obtain 501 c 3 tax-exempt status from the IRS. I have applied for the tax-exempt status and am currently trying to answer a group of questions from the IRS on the CCC application. The IRS would like to see a formal agreement with the landowner to assure that the effort of the CCC will be for the public good and not the financial gain of the landowner. Greg Fry will discuss an agreement with his brother Chris Danuser.

Another possible way to gain access would be to reason with the owner of the natural entrance. After the dig I called Duane Pemberton, the owner of the natural entrance to Carroll. He stated that he was trying to sell the cave to the state (that would be nice) and should know by mid January. I will try to talk to him again in mid January.

For now there are no additional digs scheduled. We will inspect the hole in a few months after the spring rains start. Please send me your thoughts on what you think the CCC should do next.

For old dig reports and photos visit www.carrollcave.org.

Report submitted by Rick Hines. (913 897 4258 or rickhines@aol.com)

Carroll Cave Conservancy 2/8/00 Update by Rick Hines

No digging to report but there has been activity.

We are close to obtaining a tax-exempt status, 501 (c) (3), for the CCC. I have made Duane Pemberton an offer for the natural entrance. Ed Simmons is looking into the cost of drilling a 3-foot diameter back door.

Tax Exemption
On October 6, 1999 the CCC applied for IRS recognition under Section 501(c)(3). The CCC paid a $150 fee with the application. If the exemption is granted donations to the CCC would be tax deductible. On December 28 I provided additional information to the IRS to clarify the original application. On Jan 26, 2000 the IRS asked for one additional document by 2/9/00. I have requested and obtained a 90-day
extension. The IRS needs to see a lease or other document that grants the CCC the right to access the private property before an exemption could be granted. Greg Fry and Chris Danuser have, in principle, agreed to grant the access. On 2/7/00 CCC attorney, Bill Hays, spoke to Greg to get his input on the form of the document. Bill is drafting documents for Greg Fry and Chris Danuser.

Greg called me today and we discussed the idea of drilling near the Old Sweatt schoolhouse over the Lower Thunder River. Greg suggested fencing off an acre for parking. We could even renovate the schoolhouse and convert it to a bunkhouse.

**Natural Entrance**

After the December dig I called Duane Pemberton, the owner of the natural entrance to Carroll. He stated that he was trying to sell the cave to the state and should know by mid January.

On January 24 I called Mr. Pemberton and was told a realtor had earnest money for the cave and Mr. Pemberton said he did not know who the potential buyer was. He said the price was $75,000 for forty acres and the entrance. I pointed out the land he owned on the cave side of the road was only 25 acres. He agreed. He also complained that the realtor would get 10%. He expected the deal to close by the next weekend.

On February 1, I called Mr. Pemberton. He has not sold the entrance yet. I offered him $67,500 (75,000-10%). He said he would think about the offer. We agreed that I should call him at 9:00 pm on Sunday 2/6/00. I called at 9:00pm and left a message. He has not returned my call. I called again tonight (2/8/00) – no answer. I assume he is not really interested in selling.

If I could purchase the entrance I would offer it to the CCC for the price I paid.

**Let’s Drill**

Ed Simmons has been contacting drilling companies to determine the cost of drilling a 3-foot diameter shaft into Carroll.

The first estimates were for $35,000 to $45,000. Two possible drilling locations have been considered. The T-Junction and a location near the Old Sweatt schoolhouse over the Lower Thunder River.

<table>
<thead>
<tr>
<th></th>
<th>T-Junction</th>
<th>Schoolhouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation</td>
<td>940</td>
<td>895</td>
</tr>
<tr>
<td>Stream elev.</td>
<td>800</td>
<td>795</td>
</tr>
<tr>
<td>Ceiling height</td>
<td>35 – 40</td>
<td>25 – 35</td>
</tr>
<tr>
<td>Drill depth needed</td>
<td>100 to 105</td>
<td>65 to 75</td>
</tr>
<tr>
<td>.25 miles from road</td>
<td>On road</td>
<td></td>
</tr>
</tbody>
</table>

The Schoolhouse location should be less expensive to drill, has better access and would result in less disturbance to the land owner’s cattle operation. The Schoolhouse is more centrally located in terms of the mapped cave.

Save your $$$ for your tax deductible donation to the CCC.

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**Subj:** Trip to retrieve radio planned  
**Date:** 6/10/00  
**To:** maroos@ccmail.monsanto.com  
**CC:** sleeperworld@tds.net, thrfrm@ipa.net, caver1@hotmail.com
Mike

I talked to Eddie Simmons today. He said a trip is planned for next weekend to retrieve your radio and pack. I'll let you know as soon as I hear anything.

Sorry it has taken so long.

Rick

Subj: Re: The Dig - August 12
Date: 8/7/00
To: brucecaveboy@yahoo.com

Andy

At the moment I am a little short on surface help, so I'm glad to hear that you will be there. We will meet at the dig.

Assuming Eddie rounds up enough cavers for two crews we will send one to upper Thunder to explore under the dig. That will be an 18 hr trip. A shorter trip to lower Thunder will try to radio locate a drill site.

We will have people camping Friday night at the dig. If the 18 hr trip goes it will start very early Saturday. I am still working on the exact timeline. The first surface radio work will start around 10:30 am. Hope to see you then.

Thanks

Rick

8/12/00
Radio

Subj: Radio
Date: 8/16/00
To: Earlannis@brick.net
CC: maroos@ccmail.monsanto.com, griff@cheerful.com

Earl

Thanks for the loan of your radio.

We located a point near the first right side down Thunder River. After two hours of exploration of the first and second right side the underground crew transmitted for a predetermined length of time to tell me where to expect the next transmission. As it turned out, the two side passages were determined poor sites for drilling so the code transmission told me they were going to Convention Hall by way of the T-Junction. I picked them up at the T-Junction on schedule.

I missed the last transmission from Convention Hall. Two compounding errors put me out of range. First,
the transmission that I thought was from the first right side was 125' farther down the passage because that was the first point they found to set up the transmitter. The second error was our estimate of the distance off Thunder River to the Convention Hall high dome room. Before the trip Eddie estimated 500'. When they came out the estimate was 1000' to 1200'.

I will have a better fix on the point over the dome room next time.

Do you mind if we keep your radio awhile longer? I think the next trip will be before mid September. Of course we will get the radio to you anytime you or someone else needs it.

The radio worked fine throughout the trip. My starting location for the first point was about 300' off ground zero but I was able to pickup the signal and zero in quickly. I thought we would be 600' from the point we set with Mike's radio last time. We ended up only 300' away. 125' of the difference is due to the unexpected location of the radio transmitter but the remaining difference of 175' is unexplained. Hopefully we will get a chance to test the two radios side by side on a future trip. The only radio failure on this trip involved the unique washer holding the strap on the receiver. The nut came off on the inside of the aluminum box. I found the coin and the screw.

Radio trip  9/30/00

Planned
Eddie
Carl Wagner
Paul Woods
4 from Illinois
Kerry Rowland
Bob
Jamie
Jeff Page
Tom Lounsbury
We have pinpointed a spot over a dome-room in the Convention Hall Passage of Carroll Cave. The top of the dome is about 50 feet from the surface. We have an agreement, in principle, with the landowner to allow the CCC to drill a 3-foot diameter access shaft.

I hope to see you at the CCC meeting at the Truman Lake State Park shelter house next Sunday at noon. This is an important meeting to set the course for the CCC and Carroll Cave. If you plan to come please let me know so we can plan the lunch that will be provided.

Rick Hines
913 897 4258

Subj: Cave Radio
Date: 10/3/00
To: Earlannis@brick.net
CC: griff@cheerful.com, brucecaveboy@yahoo.com, mushroom@stlnet.com, tom@idir.net, maroos@ccmail.monsanto.com, jeffpage@att.net, Feakespeak@juno.com, lathers@usmo.com, krcave@moaccess.com, kra@postnet.com

Earl

Thanks for the use of your radio. We had a very good day Saturday.

It started with testing the system prior to the departure of the underground crew. We found the battery connection between the small battery and the transmitter to be intermittent. This could have been a serious problem if not corrected or if the underground crew was unaware of a problem. We cleaned the contacts and got better results but eventually decided to go with the big battery, which seemed to connect more consistently. We had greater confident in the time capacity of the big battery based on previous trips. We also had a big enough crew to handle the extra weight.

Both radiolocations worked flawlessly. The prior months surface survey work and earlier radio points allowed me to adjust my AutoCAD maps to bring the cave, radio points, and surface features into better alignment.

We picked up the signal from the junction of Convention Hall and the Thunder River at the exact time expected. We were just about 100 feet from ground zero. Depth calculations ranged from 120 to 135 with and average of 125 feet. Later I found that the underground crew had trouble leveling the transmitter.

The second transmission was from the dome-room in Convention Hall. Without a map of Convention Hall we had to guess where to be on the surface. This time the signal came on 10 minutes early. Again we were within 100 feet of ground zero. We had a very strong signal. The depth readings were very consistent at about 75 feet. Four readings were taken at 100' from ground zero and then readings were taken at 50' and 200'. Again we calculated about 75'. All readings were in the range of 70 to 76'.

The transmitter was placed at the top of the breakdown pile in Convention Hall. The underground crew estimated 25 feet from the transmitter to the ceiling. FIFTY FEET to drill!!

The dome-room is under property owned by Bill Fredrick. I just started talking with him in August but he is cooperating and has agreed in principle to sign a lease. A local driller is scheduled to drill a 9” hole Thursday or Friday. We will see the dark at the end of the tunnel soon!

I have your radio at my home. Let me know if you need it returned soon.

Thanks to the underground crew and the surface crew. The under ground crew pushed hard to be on the spot and on time. Thanks also to all the original Carroll cavers that generated the survey data and maps that allowed us to find the drill site.
Thank you, thank you, thank you. We could not have done it without your radio!

Rick

October 8, 2000

Meeting Minutes
The eighth meeting of the Carroll Cave Conservancy convened at 1:05 PM at Truman Lake State Park Shelter House. The meeting was called to order by Rick Hines. Jeff Page recorded the minutes. Rick distributed a sign-up sheet to the group and asked each participant to introduce themselves and briefly discuss their interest in Carroll Cave. The attendees were as follows:

Wayne Burnett, Michelle and Bryon Carmoney, Bill Copeland, Terry DeFraties, Robert and Gerry Gattenby, Marty Griffin, Carolyn and Mike Hartley, Kay and Rick Hines, Lawrence Ireland, Andy Isbell, Tom and Tina Lounsbury, Jeff Page, Cyndia Chesshir, Dave Porter, Terry Sherman, Eddie Simmons, Kathy Sumner.

The meeting was led by Rick Hines and followed the discussion outline that he distributed to the group.

1. Only 3 at last meeting-Rick reported that the last meeting had only three people in attendance.

2. Treasures report
   Rick cited the need to maintain a list of donors and send a Thank you letter to each. Treasurer Wayne Burnett reported a treasury balance of $785.92.

3. New since last meeting
   a) No digging in sink since last December due to safety concerns about the instability of the rock in the rooms opened up at the bottom of the sinkhole.
   b) We now have tax exempt status, 501(c)(3) and need to establish a list of charter members to remain in compliance.
   c) Rick distributed maps of the land over Carroll Cave, which showed ownership of the various sections.
   d) Have Lease from Greg Fry, owner of land above the cave.
   e) Have Lease from Chris Danuser, owner of land above the cave.
   f) Have pinpointed a spot over the T-Junction
   g) Have pinpointed a spot over DR1 105 feet to cave
   h) Have pinpointed a spot over Convention Hall 50 feet to cave on Bill Fredrick property. Fredrick will let us drill but does not want to sign lease. CCC must have legal control (lease) of the property to maintain tax-exempt status.
   i) Have pinpointed a spot over Convention Hall Passage meets Thunder River 100 feet to cave on Chris Danuser property
   j) A second 50-foot to cave spot exists between Convention Hall and Thunder River that is probably on Danuser side of the fence. We need to pinpoint the spot for possible drilling.

4. Other old Business
   Rick mentioned that the first gathering of people who were interested in opening a new entrance to Carroll was first held on 11/18/95. That was a clean up of the sinkhole where we would dig. The CCC was established 1/22/98. One participant expressed interest in pursuing the sinkhole dig. Rick discussed the “smell test” he was hoping to do at the sinkhole to see if we could determine how close the dig had come to accessible passage in the cave.
5. **What next?** Without a lease from Mr. Fredrick, we should not pursue drilling on his land at this time, even though he is willing to have us do so. Rick suggests the next steps are:
   a) Pinpoint 50-foot to cave spot on Danuser’s side of fence.
   b) Select site for shaft
   c) Have Stamper drill 9” hole at the spot ($450 for 80’ or less)
   d) Down hole video – drop video camera into the shaft
   e) Determine driller and cost for 3-foot hole- a discussion ensued regarding the option of dynamiting an entrance in the shaft. Rick noted that while this was a less expensive option, it would result in more labor intensive work removing the blasted rock and would result in a rougher entrance than would drilling. The group consensus was that drilling was more desirable.
   f) Raise $10,000 to $20,000
   g) Drill access shaft.

6. **Committees**: With the anticipated opening of a new entrance, it is time for CCC to form committees to handle the associated responsibility. Meeting participants were asked to volunteer for the following committees.

   **Membership**, Chairman Bryon Carmoney, Member Andy Isbell
   Categories for the committee’s consideration
   Sweat Equity (those who have devoted considerable time to the project so far)
   Landowners (who have granted us access to their property)
   Minor (to be determined if minors can be members)
   Organization (to be determined if grottos and other organizations can be members)
   Honorary (e.g. Bill Hays, Atty, who has done work for CCC pro bono)
   New (committee determines membership requirements)
   Current members are those with Sweat Equity, Landowners, and lawyer (see type column on CCC participants list).
   Dues (committee to determine dues for the various categories)

   **Access**, Chairman, Chairman Eddie Simmons Members Tom Lounsbury, Dave Porter, Mike Hartley, Gerry Gatenby
   Committee will determine requirements for gaining access to entrance, the limits on trip sizes and prioritize the types of trips allowed. Gate security and hardware for the entrance are additional issues.

   **Survey/Maps**, Chairman, Tom Lounsbury

   **Landowner Relations**, Chairman, Rick Hines
   Meeting participants agree that no one other than the chairman talks to the landowners about CCC business.

   **Drilling**, Chairman, Chairman, Eddie Simmons, member Bill Copeland
   Responsible for seeking bids from qualified drillers.

   **Fund Raising**, Chairman, Michelle Carmoney member Kathy Sumner

   **By Laws**, Chairman, Jeff Page member, Lawrence Ireland

   **Web Page**, Web Master, Marty Griffin

7. **Issues**

   Jeff Page submitted a list issues surrounding the opening of a new entrance. Most of these issues had been covered in the discussions on committees. Additional issues discussed were awareness that there may be media attention and relations with area residents.

   Also discussed was an issue submitted by Kerry Rowland (not present at the meeting), who had participated in the most recent fieldwork. His was concerned that Convention Hall was not the best place to dig due to the ceiling being relatively weak sandstone and the possibility of entran ts tracking mud from CH to Thunder River thereby endangering cave fish and other species. The points from the discussion that followed were that we are limited to where we drill by the number of landowners who will cooperate. Finding another location where the depth was acceptable would be very difficult. The mud
could be dealt with by finding ways to harden it as has been done in other caves. We should spend whatever time is deemed necessary to prepare CH for traffic. Most thought that a safe route through the sandstone breakdown could be found or developed. The consensus was that we should proceed with our next steps as outlined in section 5.

8. Other new business
One participant recalled that the cave might be listed on the registry of National Historic Landmarks that could possibly be an obstacle to the CCC efforts. He said he would look into it and report.

9. Next meeting:
   When 12/3/00
   Where – to be determined.
   This assumes that we have drilled a hole by then and need to discuss costs and other considerations. If this has not happened by 12/3, we may postpone the meeting until January.

10. Meeting adjourned

11/4/00 Radio


The trip and radio work went like clockwork. We located four points as follows.

Convention Hall Turn
Distance to transmitter: 123 feet
270 feet to fence
8 feet NW of prior radio point

Formation room
Distance to transmitter: 118 feet
Distance to drill: 88 feet
Chris’s side of the fence

Tom’s dome room
Distance to transmitter: 92 feet
Distance to drill: 77 feet
Fredrick’s side of the fence

T-Junction
Distance to transmitter: 126 feet
Distance to drill: 120 feet

I will contact Chris Danuser (when he returns from vacation) tomorrow. I will ask for permission to drill a 9-inch hole at the T-Junction as soon as possible. Before drilling a larger hole we will need to change the lease to reflect the new location.

Rick
**11/10/00 -- Pilot Hole Completed**

A 9” pilot hole has been drilled into Carroll Cave at the T-Junction. We hit air at 12:30 PM, 11/10/00 at 118.5 feet below the surface. The drill dropped through a 10-foot void (Carroll Cave) and was then pushed through about 4 feet of loose rock (breakdown) before pulling out after a maximum depth of 132 feet.

Gary Sisk, a driller from Odessa Mo, will open the 9” hole to 36” in diameter at his cost that he guarantees will be $20,000 or less.

Rick Hines

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**Carroll Cave Conservancy - December 3, 2000 - Meeting Minutes**

The ninth meeting of the Carroll Cave Conservancy convened at 1:05 pm at the Lake Ozark, MO City Hall meeting facility. The meeting was called to order by Rick Hines. Members were asked to update their address information on the sign-up sheet. The attendees were as follows:

Jeff Andrews, Wayne Burnett, Michelle Carmoney, Steve Dalton, Terry DeFraties, Carolyn Hartley, Mike Hartley, Rick Hines, Kay Hines, Andy Isbell, Jeremy King, Ron Lather, Mike McKinney, Tom Lounsbery, Jeff Page, Kerry Rowland, Ed Simmons, Jim Stamper, Kathy Sumner, Lisa Teufel, Carl Wagner

The meeting was led by Rick Hines and followed the discussion outline that he distributed to the group.

1. Jeff Page read the minutes of the last meeting.

2. Treasury Report –
   a. Wayne Burnett reported that there is currently $4,020.90 in the CCC treasury and read a list of recent donors. Rick urged members to check & see if their employers offer matching funds for employee donations to qualified 501(c)(3) tax exempt organizations.

3. New since last meeting:
   a. 11/14/00 radio work - the 50-foot drill site was on the wrong side of the fence. The second 50-foot drill site turned out to be 77 feet and was still on the wrong side of the fence. The third 50-foot drill site was on the right side of the fence but the drill depth was 88 feet and we would have entered into a nice formation room. A 120-foot drill site was located over the T-junction.
   b. The Lease Agreement Modification allowing CCC to drill at the new location was signed by Chris Danuser.
   c. A 9” pilot hole has been drilled into the cave at the T-Junction. We hit air at 12:30 pm 11/10/00 at 118.5 feet below the surface.

4. Membership Committee Report presented by Andy Isbell - committee member:
a. Andy read the Membership Committee Recommendations written by him & Bryon Carmoney and encouraged member input.

b. Members questioned and discussed the suggested amounts for membership dues. In order to facilitate immediate dues payment members passed a motion to set the regular membership dues at the recommended $25 for the time being.

c. Members suggested that membership cards have a membership number. Rick further suggested that sweat equity members be given the first membership numbers.

5. Access Committee Report presented by Eddie Simmons - Access Chairman
   a. Eddie outlined suggested access policies that will theoretically allow trips 365 days per year - however the trip destinations, size of parties, and purpose of the trips will have to fall within CCC access guidelines that will assure that conservation as well as exploration goals are being met.
   b. Trip requests must be made in writing and written trip reports must follow and will be kept on file by the CCC.
   c. Members discussed whether allowing trips 365 days per year would allow too much traffic - or more specifically, since qualified trip leaders being available 365 days per year is highly unlikely - whether we should set maximum traffic limits initially across the board - or later set maximum traffic limits in certain locations of the cave based on data that we will be able to gather as we explore in a responsible and organized manner.
   d. Members discussed whether the entrance should be kept permanently vertical which could be perceived as positive for limiting access, or as negative for excluding non-vertical cavers. This prompted further discussion as to whether installing a 120 foot ladder would make the entrance any less vertical. The general consensus is that we don’t have to make that decision immediately, but initially the access we plan to create is vertical by necessity rather than by design.

6. Survey/Maps Committee Report presented by Tom Lounsbury - Survey Chairman
   a. Tom read the suggested guidelines for surveying the cave and asked for input from Ron Lather who has been involved in similar large cave survey projects. Ron commented that if such guidelines are put into place in the very beginning of a survey project many problems can be avoided.
   b. Various members encouraged Tom to pursue gathering any existing survey data that may be available and had suggestions for who he should contact.

7. Landowner Relations Report presented by Rick Hines - Chairman
   a. As previously noted, Chris Danuser has signed the Lease Agreement Modification.
   b. Greg Fry would like to see the schoolhouse restored as a bunkhouse.

8. Drilling Committee Report presented by Rick Hines
   a. Jim Stamper, who drilled the 9-inch pilot hole, was in attendance. Jim reported that while he was originally somewhat reluctant to take on this project he is now glad that he did. He explained that in order to drill a larger hole he would have to purchase new equipment and risk damaging it and the hole. Members assured him that we are quite happy and grateful for the pilot hole.
b. Rick reported that Gary Sisk, a driller out of Odessa, MO was initially talking about $10-$20 thousand to drill a 3-foot diameter hole, depending on the depth. He is now saying that he would drill a 120-foot hole for $20 thousand or less and would not make a profit. He will talk about scheduling when we have $20 thousand.

c. Hays Drilling is limited to 80 feet.

d. Midwest Foundations gave a bid of $74 thousand to drill a 120-foot hole.

e. Steve Dalton was in attendance and requested to submit a bid to enlarge the pilot hole with a jackhammer. He reported that this method has been used successfully before and expressed confidence that it will work for this project. He will submit a proposal at the next meeting.

9. Fundraising Committee Report presented by Kathy Sumner - committee member:
   a. Kathy read the fundraising committee report and recommendations and asked for input.
   b. Various members had recommendations for other fundraising projects including: a raffle, printing T-Shirts to give to donors, and asking the NSS News to print a donation request for CCC. Kathy will contact the NSS News. She asked members with ideas to contact her or Michelle Carmany, Fundraising Chairman, with follow-up information on their suggestions.

10. By Laws Recommendations presented by Jeff Page - By Laws Chairman
   a. Jeff summarized a draft of the constitution and asked members for an exchange of ideas and documents that can be used to put together a final version.
   b. Several members volunteered to join Jeff on the By Laws committee since so many future steps require that the By Laws be finalized.

11. Web Page Report:
   a. Marty Griffin, Web Master, could not be in attendance but Rick Hines reported that the general consensus seems to be that the web page should be the primary tool for posting general information regarding CCC.

12. New Business:
   a. Rick asked for volunteers for the Nominating Committee. Mike McKinney and Jeff Andrews volunteered.

13. The next meeting will be held at Rick Hines home in Kansas City on January 14 at noon. Lunch will be provided. Members from Kansas City are encouraged to bring a dish. By Laws should be ready for finalization at the next meeting and other policy recommendation reports should be in writing.

Meeting adjourned at 4:35 pm.

Minutes recorded by Kathy Sumner