

Peppersauce Cave Graffiti Removal and Restoration

June 22-24, 2018

Restoration Trip 5

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Summary:


A total of 36 participants helped over the weekend including one preparing food in Phoenix; 15 on Friday, 33 on Saturday, 17 on Sunday. Approximately 300 tags were removed. The volunteers were an even mix from the Central Arizona Grotto and the southern Arizona grottos. The USFS equipment for the project was very useful, and allowed the volunteers to work faster and more efficiently. A KOLD news team (reporter Craig Reck and photographer (Steve?)), Tucson channel 13, came by Friday afternoon and took some video and interviews. The article made the 6 pm Friday news and is online at <http://www.tucsonnewsnow.com/story/38490525/volunteers-clean-graffiti-out-of-peppersauce-cave-this-weekend>. Six on Sunday's team needed to leave early making the pull out of equipment a bit rough on the remaining volunteers. Recreational cavers passing by were more than willing to help with getting the equipment out to the trailer.

Weekend Goals:

Remove the new tags placed at the end of April (one time event). Remove all tags in the Big Room, Main Lake, and crawlway between. Start down the Rabbit Hole if time permitted. All goals were completed.


Project Items addressed:

- After the mid-April clean up, a party with substantial vandalism was held in the cave in the Big Room. This caused a setback to the work already completed and added to the work further in. They had a campfire with 4 inch logs (never mind that there is nowhere for the smoke to go). New tags were made all through the cave with pink, lime green and blue spray paint and paint. Coronado NF was notified of this under an earlier letter.
- A grant for almost \$1000 in equipment from the USFS was received in time for the weekend work. Almost all of the equipment was used in the cave and on the project. Special thanks to Jeff Stevens for picking it up and Joe Winfield for coordinating on the USFS side.
- None of the "OUT →" signs or "→" arrows were tampered with other than some lime green spray paint on one arrow. More arrows were installed. (There are now 55 arrows in the cave)
- **Other than the end-of-April party vandals, there was only one new tag noted in the cave.**
- An additional \$18,249.91 of volunteer value was added to the project since April 21st with the total estimated **volunteer value through June 28, 2018 at \$75,731.16**. We are using the \$0.55/mile for mileage calculations. If you would prefer we calculate volunteer value using \$0.18/mile please let us know.
- The major accomplishments for the weekend were:
 1. We removed somewhere over 300 tags during the weekend. The total count removed is above 1000 tags at this point. The front part of cave is essentially free of tags from the Entrance through the Rabbit Hole though we will need to do some touch up removals.

June progress is colored in  Jun 2018 and  Needs more work . **Figure 1 shows the current cleaning status.**

2. Several tags were removed in the first and second rooms with news media filming and interviewing. A missing tub of equipment (later found) caused a slower start. All of the

new tags along the Main Corridor up to the Big Room were removed on Friday. Between 15 and 20 tags were removed.


3. The Main Lake Room was cleaned. There were 43 tags on initial count but more were found. Sand blasting and brushes were used. No biodegradable solvent was used in the Main Lake Room.
 4. The crawlway between the Main Lake and Big Room required seven hours of additional work to complete using solvents, brushes, and a grinder.
 5. The Big Room was the primary concentration of work. About ten new party tags were removed in the Big Room, some on areas that had just been clean in April. Another 60 to 70 tags that had not yet been removed from April were also removed. One severe, blue tag "ES+ZR" required four to remove while standing on a ladder. **The Big Room is now clean of tags.**
 6. Both the Main Lake ladder and Rabbit Hole ladder were re-secured for safety.
 7. A few more reflective arrows were added. There are fifty-five "OUT →" and "→" arrows now.
 8. All tags were removed between the Big Room and Rabbit Hole (queue White Rabbit music by Jefferson Airplane (sorry, I digress)) and continuing out the other side for the first 100 feet beyond the Rabbit Hole. The next 100 feet shown in Figure 1 as  Needs more work even though over 100 tags were removed and there are many more in this area.
 9. A 1975 tag was removed, which was beyond the 2001-2003 farthest effort.
 10. Spent sand blast media was not removed beyond the Rabbit Hole. The blast media weight and tougher passage dimensions are prohibitive.
 11. Outside the cave, all three caution signs around the bridge had been tagged on both sides. We removed the tags on the reflective warning side with the isopropyl alcohol, and then recoated the signs with WD-40 with to reduce the impact of future tags. The tags on the back of each sign did not come off. Recommendations on how to get these off would be helpful.
- Approximately 1.5 gallons of bio-degradable solvent were used.
 - One volunteer slipped, wrenched her shoulder and left the cave. She returned the next day for a caving trip. Three volunteers reported eye irritation. All reported noticing the irritations several hours after leaving the cave. This is apparently from dust in the air, or grit falling off their hair and possibly being rubbed in their eyes. All report wearing eye protection on site.

The laminated signs reserving the Peppersauce Group Campground was a nice touch, thanks. Both signs had been held up with Scotch tape and had blown down. The killer duct tape worked better.

Progress: Figure 1 shows the areas cleaned in from Trip 5.



Graffiti has been removed from these passages. More work is needed in the

 Needs more work passages.

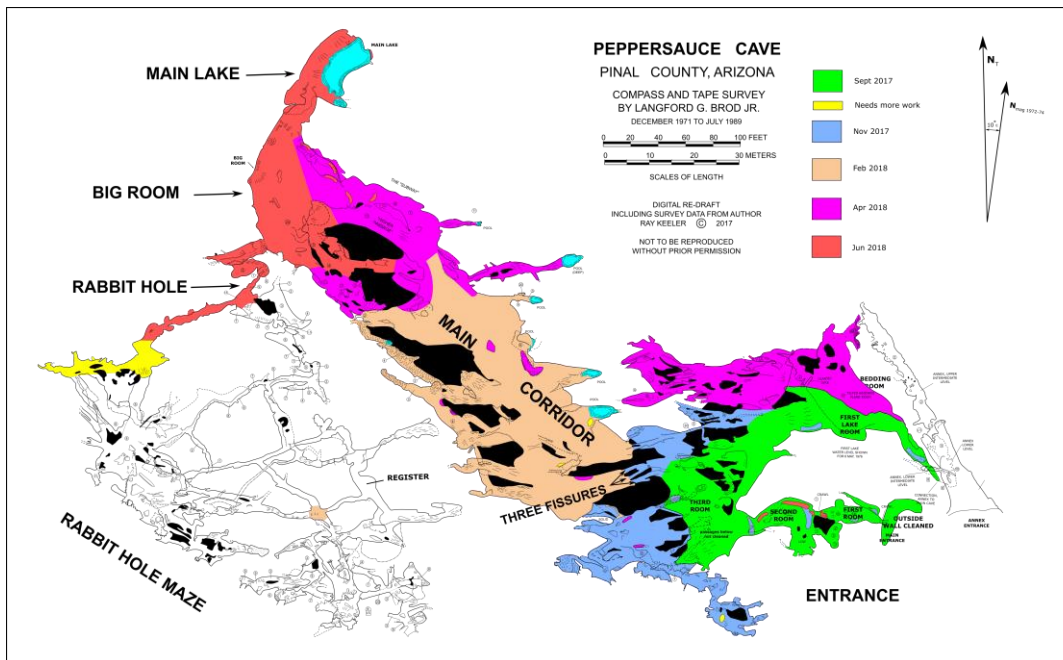


Figure 1: Peppersauce graffiti removal progress. (map by R. Keeler)

In September 2017 tag inventories were taken throughout the cave. “S” for **small** is about 1 foot x 1 foot and less. “M” for **medium** is up to about 4 feet by 2 feet. “L” for **large** are for anything larger.

Problems:

There were very few problems.

- Initially we could not find a tub with needed equipment on Friday, causing a delay in getting started.
- Six volunteers on Sunday’s crew needed to leave early for various reasons. This caused an additional load on the remaining people. We compensated by encouraging visitors to help carry out gear when they are leaving. Almost all volunteered on their way out.

Lessons Learned

- The Lessons Learned from April were used and progress went more quickly.
- Getting volunteer commitments for specific days starting well in advance worked well.
- The paint/rust removing grinding wheels work well but are expensive and erode quickly. They are also expensive.
- The equipment improvements continue to work well and will be repeated. The personnel were more efficient in the field (and happier) and more was completed per person.
- Teaming sand blasting teams with wire brushing cavers works well. Brushing first, then sandblasting is quicker and has less impact on the cave.
- Teaming solvent teams with wire brushing cavers works well. Brushing first, then solvent is quicker and has less impact on the cave.
- Grinders and electric drill brushes worked well on the harder tags.

- Doing personalized safety briefings **and** teaming experienced new volunteers is substantially more efficient than one large briefing.
- The telephone to the surface continued to help substantially with coordination of equipment and personnel.

Schedule:

August 10-12, 2018 Plans: Continue removing tags in the Rabbit Hole Maze.

September 22-24, 2018: Continue removing tags in the Rabbit Hole Maze.

**Various Photos from the weekend work:
Big Room Work:**



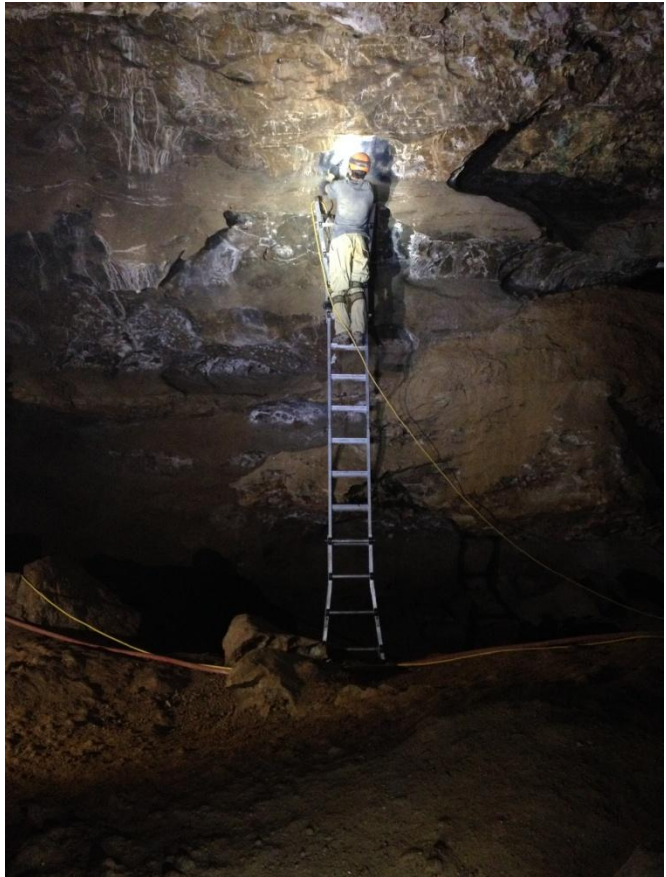
At least five tags -Dawson



Five layers deeps – This is after two hours Brushing after solvent. One more hour to go. Dawson



Balcony: Cleaned in April. Vandal party retagged in three places. This is removing the new tags. – Miller



ES+ZR: four hours requiring two people – photos Miller, Dawson

Before



After



This is the Rabbit Hole – far side, before and after. 19 tags removed. Note, our one reflective arrow can be seen when entering far side of area. This passage floods during very wet periods. Photos Miller



Note black arrow pointing in wrong direction. Reflective arrow above. Six tags removed
Photo Miller



Appx. 30 tags including 25 scratched in rock.

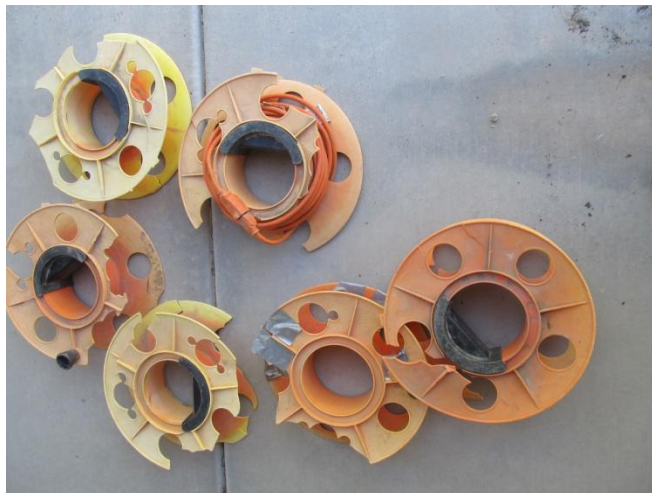


... after

Keeler



More work required: Two people on Sunday, two hours Keeler



Extension cord spools are getting replaced.