

Peppersauce Cave Graffiti Removal and Restoration

September 29 through October 1, 2017

Restoration Trip 1

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Summary:

- A total of 51 participants helped over the weekend. The volunteers were primarily from the Central Arizona Grotto, southern Arizona cavers, and ASU Outdoor club participants.
- The total estimated volunteer value per the VS Reports is \$19,176.14
 1. Through September 30, 2017 \$14,955.23 (with 545 hours)
 2. Starting October 1, 2017 \$ 4,220.91 (with 162.5 hours)
- Between 150-200 tags were removed outside the cave entrance, 1st, 2nd, 3rd rooms, and to the First Lake Room. Additional work is needed with the solvent teams in these areas.
- Some paints come off better with sandblasting. Some paints come off better with solvents.
- The 2nd Room was bad and was not completed. The attached picture is after five hours with two sand blast teams. I.e. There were many more tags that had already been removed. Additional tags were worked Saturday afternoon and Sunday.
- Five teams were sent throughout the cave counting tags and where: Small, Medium, Large. This should be the low number. There are always more.
- Several large bags of trash were removed (appx. 300 lbs.)
- Then next graffiti removal weekend will be Nov. 17th-19th, same weekend format.
- The parking area and path to the cave was cleaned of trash.
- Approximately 5.5 buckets of glass beads were used with approximately 4 buckets of spent media removed from the cave.
- Approximately 2.5 gallons of bio-degradable solvent were used.

Progress: Figure 1 shows the areas cleaned in from Trip 1. Areas in **green** have graffiti removed and sand blasting is completed for these passages. The wall outside the Entrance and the First Room were cleaned of all graffiti. The Second Room, Third Room and First Lake Room were cleaned by sand blasting but additional work is needed using the bio-degradable solvent. These areas are shown in **yellow**. Some spray paints come off easier using sand blasting. Some spray paints (acrylics and others) do not come off with sand blasting but can be removed using the solvent.

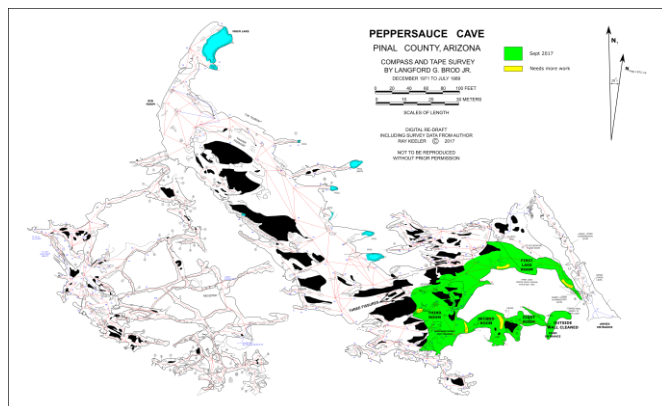


Figure 1: Peppersauce graffiti removal progress. Green areas have tags removed. Yellow areas have additional work needed. (map by R. Keeler)

The equipment performed as expected though additional improvements were identified and are being addressed. On Friday (Sept. 29) the sand blasting equipment was set up and work started. Signs for the Peppersauce Group Campground use were placed (thanks to Joe Winfield) and participants arrived.

Saturday's safety briefing was at 8 am, teams assigned and work began. Assignments included:

- Surface: communications (telephone into cave), gas for compressor and generator, sign-up sheets, equipment prep. for transport to cave, community relations (telling visitors what was being done)
- Electricity and communications were setup to the in-cave work areas.
- Three sand blast teams: with necessary tarps, safety and sand blasting equipment.
- Three solvent Teams: with necessary tarps, safety equipment, brushes and towels. Cave water was used to dilute worked areas, toweled off and removed.
- Five graffiti counting teams went through the entire cave logging tags. This data should be considered a low number and a first pass estimate. Tags were categorized as Small (2x2 feet and less), Medium (2x5 feet and less), Large (greater than 2x5 feet), and panels (solid background and big). The numbers will help with positioning teams.
- Trash removal: Approximately 300 pounds of trash were removed from the cave (Figure 2).
- Photo documentation of the work being done as well as “Before” and “After” pictures

Work was continued until 5 pm and then shut down. Two people stayed with the equipment all night (both Friday and Saturday nights) to reduce thefts by late visitors. The last group of visitors exited the cave around midnight. Some were very drunk.



Figure 2. Some of the trash removed by 1pm Saturday. (M. Vittetoe)

Sunday’s work started with the safety briefing at 8 am and work continued until after noon. Primary efforts were on Second Room, Third Room and the First Lake Room. Sand blasting is completed in these areas but additional work is needed by solvent teams. The equipment was broken down and packed for transport by 2 pm.

Lessons Learned:

Spray paints seem to be evolving. A higher percentage of tags are not coming off with sand blasting, but are coming off with solvent.

The Second Room was bad (see Figure 3) with tags being four or five layers deep. Two sand blast teams worked it all Saturday. A solvent team started on it on Sunday but could not finish the room. A primary



Figure 3a. Second Room. Exit Crawl shown in white circle. Some 30 tags shown. (R. Keeler)



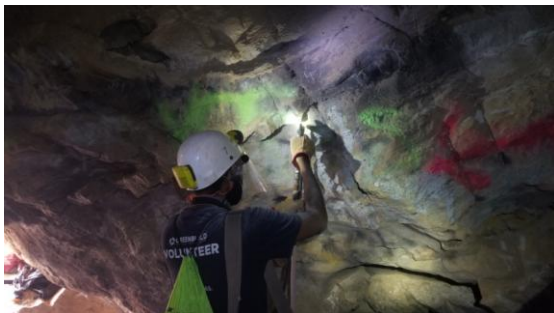
Figure 3b. Further progress in Second Room. (B. Lusk)

reason is the crawlway to the entrance is obscure. See the white circle. Visitors spend time here and their senses are heightened. In the November trip we will be installing a highly reflective sign pointing to the exit crawl. The hope is reduce the time spent in the room and also reduce the need to spray paint more exit arrows. There were approximately 70 tags in the room and the volume effected progress further into the cave.

Photo Documentation: Several “Before” Pictures were taken to help plan on what we are up against. In Bob Buecher’s 360 degree composite photo of the Big Room (Figure 4), I counted 49 tags in the high resolution photo. There will be more tags not seen from the photo point.



Figure 4. 360 degree Big Room panoramic photo with 49 tags. Two people provide scale. (R. Buecher)

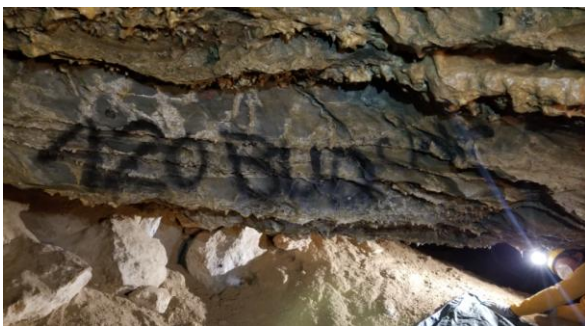


Cleaning graffiti in First Room. (B. Lusk)

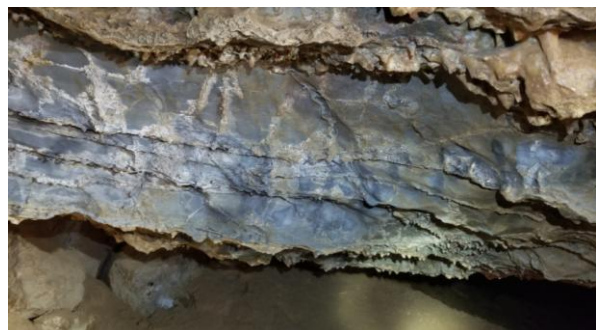


Brian Mc Millan sand blasting in Third Room. (B. Lusk)

Before and After Photos: In some of the “After” photos the grey limestone becomes more predominant by removing the brown dust covering the wall.



Before: (B. Lusk)



After: (B. Lusk)



Before: (R. Keeler)



After: Nicole Davis next to a mostly completed flowstone. The floor drops away so a ladder is needed to finish (R. Keeler)



Supporting Public Lands Day (B. Lusk)



Cave graffiti removal equipment trailer.

November 17-19 Plans: The November 17th to to 19th work trip will use a similar schedule. Besides continuing the graffiti removal with sand blasting and solvent, reflective "OUT" signs will be placed high in main passageways to reduce additional tagging. A the kiosk in the wash, the two Plexiglas panels will be replaced