

Ruth Cave -- Huntingdon County, PA

Ruth cave is a site in central Pennsylvania that is quite cold throughout much of the entry passage ways, but warmer in the large back sections. A large solution cave, the current opening is a solution tube that emerges from a high wall along the side of a road (Figure 5A). Prior to this project, the site was gated about 20 ft. inside the tube at a narrow pinch in the tube with a steel plate that was not bat friendly (Figure 5B), but did dam up the cold air, making this one of only a few sites that has seen significant growth after WNS. The site is privately owned but is properly managed to keep humans from entering the site during the hibernating season. To improve management on this site, we removed the steel door, and replaced it in a proximate location with a bat-friendly gate. We determined that during winter, the site would vent warm air through cracks in the ceiling located in the back of the cave, and then draw cold air in, further cooling the site. The completed gate (Figure 6) contains a removable bar for survey and summer time recreational access. Following completion of this project in Fall of 2018, a visit to the entryway in January 2018 revealed that the site is indeed drawing lots of cold air. A full internal survey was not completed, but for the first time since the site was created by road work in the 1980s, large ice masses were noted throughout the entry tube (Figures 7A and 7B). Attached is a signed landowner agreement to allow bat survey access in the future.

Figure 5A. Ruth Cave entrance from the road.



Figure 5B. View of interior door to Ruth prior to the project.



Figure 6. Completed bat-friendly gate at Ruth Cave.



Figure 7A. Ice at opening where solid gate used to be.



Figure 7B. Ice in solution tube about 50 yards past new gate.



Final Budget:

Source	Description	RCN Funds	Non-federal Match
Regional Conservation Needs Grant Funds	Payment to Armstrong Drilling for Dunbar Mines project	\$ 62,400.00	
Pennsylvania Game Commission	Personnel and indirect costs		\$ 20,310.19
Indiana Bat Conservation Fund	Payment to Armstrong Drilling for Dunbar Mines project		\$ 36,409.00
Indiana Bat Conservation Fund	Payment to Kennedy Above Under Ground for Ruth Cave project		\$ 7,555.00
Kennedy Above Under Ground	Discounted labor and materials for Ruth Cave		\$ 2,000.00
Total		\$ 62,400.00	\$ 66,274.19
		Total Project Cost	\$128,674.19

Citations

J. S. Johnson, M. R. Scafini, Brent J. Sewall, and G. G. Turner. 2016. Hibernating bat species in Pennsylvania use colder winter habitats following the arrival of white-nose syndrome. In, Conservation and Ecology of Pennsylvania's Bats.