

# A case study of visitation at three sites in the Shawnee National Forest

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## BACKGROUND

The Shawnee National Forest is known to be among the most fragmented national forests in the USA as a result of much of the surrounding land being privately and state owned. The Shawnee is full of natural areas that are delicate and can easily be harmed. A natural area can be stated as an area relatively undisturbed by human activities and characterized by indigenous species. Use of a natural area comes in many forms including hiking, rock climbing, camping, horseback riding, and has various numbers of users within each group that arrives.

The project started upon our first arrival to the Panther Den wilderness, after a 2 hour journey searching to find the location. Finding the trailhead sign to be defaced with no representation of a wilderness area and having such a hard time finding the road leading in we came to a final research question: **What determines why people visit natural areas, and how, if at all, does this affect knowledge and visitation of three natural areas in the Shawnee National Forest?**

## PURPOSE AND HYPOTHESIS

Natural areas, including national forests, wilderness areas, state parks, and wildlife refuges among others, are a unique challenge for sustainable development. There is a constant conflict between conservation and recreation. On one side, too much visitation at these areas can be harmful to the environment; on the other side, too little means that people will place no value upon them.

Our study addresses the issue of sustainability in natural areas through quantification and analysis of visitation trends at three sites within the Shawnee National Forest. These sites are **Pomona Natural Bridge**, **Cove Hollow**, and **Panther Den**. Through on-site and off-site personal surveys, we aimed to extract data to directly quantify visitation levels, and identify general public perception of these three and 21 other natural areas in Southern Illinois. We intend to statistically quantify and analyze these data for any trends as related to visitation rates and what influences public perception may have on them. With these quantifications and analyses we hope to be able to draw some useful conclusions about sustainability in natural areas. For various reasons (location, isolation, signage, etc..) we hypothesize that Panther Den is the least visited of these sites.



Pomona Natural Bridge - located in Pomona, IL southwest of Carbondale approximately 15 miles driving distance.

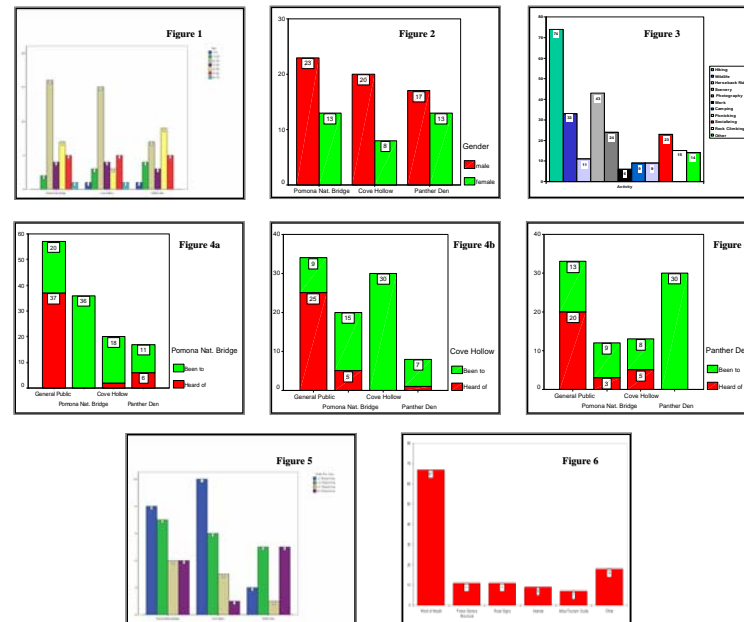
Cove Hollow - located in a central western cove in Cedar Lake approximately 11 miles driving distance from Carbondale.

Panther Den - located just south of Devil's Kitchen Lake and southeast of Carbondale approximately 20 miles driving distance.

## METHODS

To determine factors affecting visitation in the selected areas of the Shawnee National Forest, three locations were chosen from which to distribute surveys. These locations were chosen because their similar distance from major population centers in the area (10-20 miles), each is similar in size, and each is similarly accessible to the public. Surveys were designed to extract data relevant to what subjects do at natural areas, how often they visit, why they visit, and their general knowledge of selected sites chosen for this study. The backs of the surveys were designed to assess how well subjects know of the chosen sites in an unbiased manner; to this end, we included 21 other natural areas within the Shawnee National Forest. The surveys were simultaneously passed out on-site on three different Saturdays to collect as much reliable data as possible. We also took a head count by waiting at the trail heads of each site and taking note of any relevant information (gender, group size, length of stay). Then similar surveys made for the general public were passed out to the students in a classroom setting. With the data obtained, various statistical analysis software packages were used, such as Microsoft Excel and SPSS. In SPSS, a cross tabulation analysis was performed with numerous variables in order to gain a better understanding of visitation trends and influences.

## RESULTS



## RESULTS/DISCUSSION

Upon analyzing the data many similarities and differences were found. **Figure 1** shows the age of visitors at each site; there was a wide distribution across all age groups of the visitors that arrived, though 21-30 year old people were the most common to come during our survey distribution periods. This does not include the general public because the results fell entirely within two categories: 11-20 and 21-30. This was expected though, as the survey group consisted entirely of students. **Figure 2** shows the gender totals of visitors at each site. The majority of people who visited each site were male. A notable issue of gender is that, in the female population, they were not found to have visited alone, while males had a tendency to visit in groups or alone. **Figure 3** shows common activities reported by visitors to each site, these are the totals for all three sites. It was found that the most common activity that users came to each park for was hiking, with ~77% reporting this choice. In a distant second was scenery, with only ~45% reporting it. Work proved to be the least common activity reported. **Figures 4a-4c** show the number of people who have heard of or been to each of the sites, which represents how well known each is. **Figure 5** shows the number of times per year on-site subjects claim to visit, suggesting that Panther Den is the least commonly visited of the three sites. **Figure 6** shows totals of how visitors learned of the site they were at. Word of Mouth was by far the most common method, with 70% reporting it, while the other methods were less common, with only ~11% reporting them.

## CONCLUSIONS

Ultimately, based on data collected in the course of answering our initial research question, we have found that our hypothesis seems to be correct. Many of the results of our analyses show that Panther Den was a lesser known natural area. In addition to being a lesser known place, many of those who did visit reported lower rates of re-visitiation. It is also worth mentioning that the college-age groups visited Panther Den much less often than either of the other two sites, while the middle-age groups tended to be more common. We speculate that this may be connected to the higher reporting of photography as an activity here, coupled with the assumption that older visitors may enjoy less strenuous activities.

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