

## Agency-Sponsored Treasure Hunts: Providing Alternatives to Traditional Geocaching

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### Introduction

Geocaching, a sort of modern-day treasure hunt using Global Positioning System (GPS) units, has been prohibited in most national parks largely due to federal regulations prohibiting disturbance or damage of natural features and leaving behind unattended property. National parks, including Acadia National Park in Bar Harbor, Maine, are continually challenged by unauthorized geocache sites within their borders. The National Park Service (NPS) must take enforcement action when necessary to prevent resource damage and ensure visitor safety. However, it has become clear that geocaching is a well-established, popular pastime that is more than just a trend, and some parks perceive positive benefits in constructively managing the use.

Acadia National Park's pilot, NPS-sponsored EarthCache program is an example of how the agency's responsibility to preserve resources and provide for appropriate visitor enjoyment can be achieved while fulfilling some of the desires of the geocaching community.

### Background

On March 3, 2000, the United States government removed the selective availability programmed into satellite systems designed to make GPS location less accurate. The result was that, under the right conditions, over-the-counter GPS units became accurate to within 20 feet, a great improvement over accuracies averaging hundreds of feet using the same GPS units just one day before.

Geocaching was reportedly born the next day. An Oregon computer consultant placed a bucket filled with various items, including videos, books, software, and a slingshot, in the woods. He also included a logbook and pencil to record visits to the site. He called the idea the "Great American GPS Stash Hunt" and posted the coordinates in an Internet GPS users' group. The rules were "Take some stuff, leave some stuff."<sup>1</sup>

Since that time, geocaching has become a wildly popular pastime, due in part to the thrill of achievement and the pursuant recognition for that achievement,<sup>2</sup> the pervasiveness of the Internet, and affordable GPS technology. The activity's explosive popularity has led to the development of more than 389,000 geocache sites worldwide, as listed on the [www.geocaching.com](http://www.geocaching.com) website as of this writing.<sup>3</sup>

### Geocaching: Definition, evolution, and variations

Geocaching is like a game of hide-and-seek for both children and adults, where the searcher seeks a hidden object instead of a person. Participants download coordinates from a website, follow the coordinates to a location using a GPS unit, and then search that loca-

tion for a hidden container (cache). In traditional geocaching, caches contain assorted trinkets left behind by other participants. Participants often exchange items they brought with them for another item in the container. Traditional geocaches also typically contain a logbook in which geocachers can make journal entries. Once the location is visited, participants record their visits on the Internet, adding to a list of lifetime geocache visits.

Since its inception in 2000, traditional geocaching has evolved into many forms. Acadia's program combines components of several of these variations, including virtual caches, EarthCaches, multi-caches (offset caches), and mystery or puzzle caches. Virtual caches rely on the techniques of traditional geocaches without including a physical cache. EarthCaches include educational messages about geoscience. Multi-caches (offset caches) involve two or more locations and include a physical container at the final location. Mystery or puzzle caches require solving a puzzle to obtain the coordinates.

Variations such as virtual caches were developed to address the concerns of landowners and managers who felt that traditional geocaches were inappropriate on their lands. These alternative forms of caches are more educational, environmentally friendly, and appropriate for such areas. Virtual caches were developed for areas where digging and placement of physical caches were inappropriate or unlawful. Virtual caches utilize the concept of traditional geocaches without the need for physical containers or the exchange of items. Participants prove a visit to the site by returning to the website to enter the answer to a question, such as "find the date on the memorial plaque" or "count the number of flagpoles."

EarthCaches are a type of virtual cache of particular interest to public land management agencies. EarthCaching was developed through the collaborative efforts of the National Park Service and the Geological Society of America to teach participants about the unique and interesting geological features and processes that help tell the story of the earth's development (Figure 1). By design, EarthCache submissions require approval from park managers prior to being placed on the Internet. Following Leave No Trace practices, sites are located along trails and other durable, sustainable sites. As of this writing, the official EarthCache website ([www.earthcache.org](http://www.earthcache.org)) listed 907 EarthCaches worldwide, 51 of which are located within NPS units.<sup>4</sup>

### **Caching activities on National Park Service lands**

The National Park Service manages recreational activities according to the criteria listed in sections 8.1 and 8.2 (and 6.4 for wilderness areas) of the *Management Policies 2006*. While these policies include EarthCaching as a possibly appropriate activity in certain areas, they do not explicitly preclude traditional geocaching activities. Instead, these activities would normally be ruled out either by sections 1.4.7.1 and 8.2 because they cause unacceptable impacts, or by other general management policies aimed at protecting each park's natural and cultural resources. Moreover, disturbing or damaging natural features, abandoning property and, in some areas, hiking off trails—actions associated with traditional geocaching—are listed as violations in Title 36 of the Code of Federal Regulations. The development of "social paths"—unintended trails that result in soil compaction and damage to vegetation—is one of the greatest potential problems. In addition to the concerns of resource damage, traditional geocaching has been widely considered undesirable due to the anony-

mous nature of the Internet postings; the lack of advance permission, control over placement or content (Figure 2), and accountability; and public safety concerns (including the potential for sexual predation).

Within the parks that allow caching activities, managers generally require special use permits prior to placement. Without special use permits in place, many parks prohibit geocaching altogether. Whether or not parks allow any or all caching activities is determined at the park level through park planning. One outcome of park-by-park decision-making is that the geocaching community perceives inconsistencies; this, in turn, creates a challenge for NPS employees who must explain their rationale for allowing or not allowing the activities.

Although there is no specific servicewide policy or regulatory prohibition against geocaching, the need to prevent unacceptable impacts requires that NPS personnel take enforcement action against unauthorized sites within NPS boundaries. Acadia National Park is no exception: on average, the park removes three unauthorized geocaches and their respective Internet listings per year. The park currently contains seven virtual caches, and more than 330 caches are located within the area encompassed by the zip code of park headquarters.

### **Acadia National Park's approach**

While the staff at Acadia National Park fully supports all efforts to prevent or reduce resource damage, it believes that parks should not continue to indiscriminately reject caching activities or ignore their potential educational value. Providing opportunities for appropriate public enjoyment is an important part of the NPS mission, and NPS leaders are especially intent on finding ways to appeal to the younger generation of potential park users. Therefore, park staff, led by Stuart West and Mollie Behn, designed and developed a carefully considered pilot program utilizing EarthCaches as a platform (Figure 3). As of this writing, it appears Acadia is the first national park unit to actually develop a caching activity.

Despite obvious concerns about the potential impacts of caching in the park, West rec-

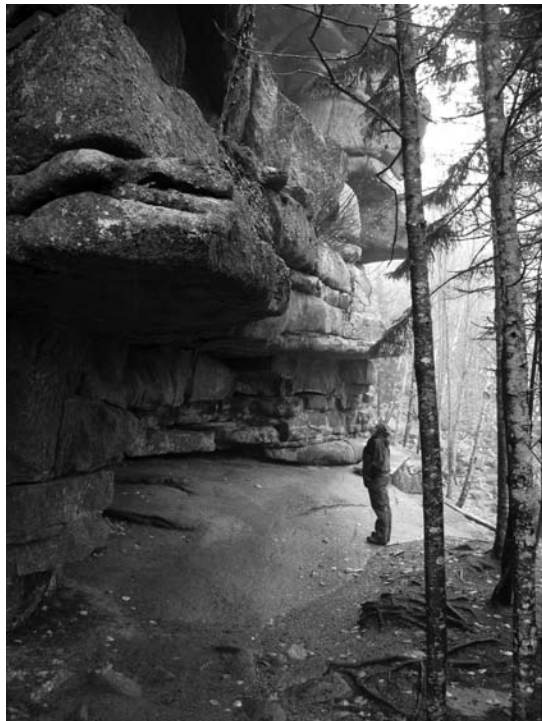


Figure 1. Each stop in Acadia's EarthCache Program highlights the park's significant geological resources. Here, volunteer Mollie Behn, co-creator of Acadia's program, studies a sea cave that is used to demonstrate ancient sea levels. National Park Service photo by Stuart West.

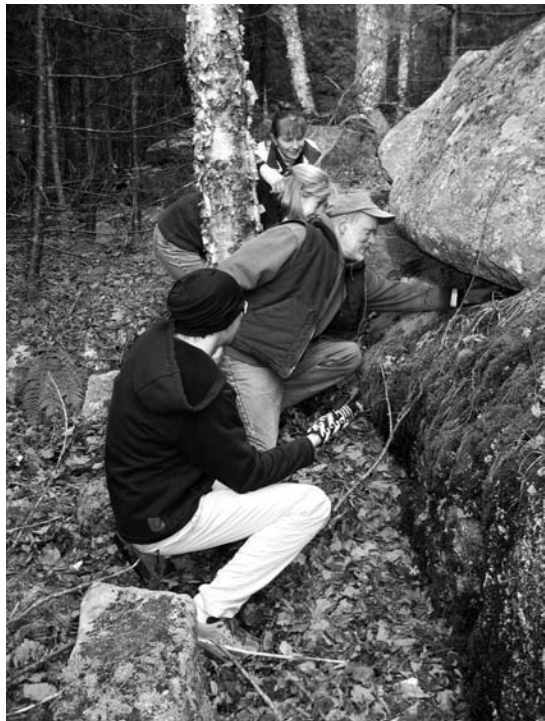


Figure 2. The placement of traditional caches in unsuitable locations may require participants to leave established trails, which damages vegetation and can harm other natural or cultural resources. National Park Service photo by Stuart West.

ognized the many untapped benefits of caching activities, including the opportunity to provide an appropriate form of outdoor recreation to new groups of visitors. The intent of the program was to engage an otherwise uninvolved, unsupportive segment of the population in a self-paced program that would not only enhance understanding and appreciation of the resources protected by Acadia National Park, but also garner broader support for public lands that protect unique features of national significance. Recognizing that the National Park Service is often criticized for being hostile to potential user groups, another goal was to find a positive way to manage the use, instead of simply saying “no” to geocaching. The park mission of resource protection and interpretation guided the program’s development.

Acadia’s EarthCache program uses carefully scripted clues to lead participants to a series of predetermined

field locations within the park’s frontcountry. The program requires puzzle-solving at each of the five field locations. Participants who follow the adventure through to the end receive proof of completion in the form of an Internet-generated certificate of completion or through access to a NPS letterbox stamp and logbook.

This pilot program aims to develop insight for the National Park Service about methods of addressing geocaching in the national parks. The program is designed in a manner that makes it compatible for most parks and can, therefore, become a model for future GPS-based programs servicewide.

### **Considerations for adopting or creating a caching program**

Even a park-developed EarthCache program requires the completion of many formalities before being approved by the Geological Society of America. The designers of Acadia’s program highly recommend, therefore, that parks take an active role in reviewing and managing caches allowed in their parks.

The process encompasses several steps. First, analysis of a park’s enabling legislation will ascertain if a GPS program is even feasible. Second, the proposed program must be compatible with established interpretive themes and goals. Third, park management must



Figure 3. By carefully selecting the location of EarthCache sites, park staff are able to keep participants on established trails, reducing the creation of social trails and subsequent impacts on natural and cultural resources. National Park Service photo by Stuart West.

approve the program. Every division has a stake in a GPS program. Resource management should consider site durability and compliance issues; protection should consider implications for archeological theft, safety, and patrols; and interpretation should consider time requirements to develop or validate the program and make it available to participants (e.g., post it on the park website).

### **Communication with the geocaching community**

Effective management of geocaching in national parks begins with an honest effort to communicate with the geocaching community. Park rangers sometimes make the mistake of removing caches without following up with the geocacher or asking the [www.geocaching.com](http://www.geocaching.com) webmasters to remove the cache information from the website. These half-completed enforcement activities can result in anti-park sentiments from a community that has the potential to become a strong park supporter.

Park efforts should be directed at working *with* geocachers to permit only appropriate, authorized caching activity. The first step in doing this is to make contact with geocachers before their caches are removed. Unless geocachers feel they can trust park managers, they will not likely assist with the development of park-sponsored caches. Because geocachers value their anonymity, they will not give up their true identities without a trusting relationship.

Involving geocachers in the development of authorized caching activities, such as Acadia's EarthCache program, is essential for the success of the program. They can provide valuable insights into the logistics and feasibility of a program.

### **Potential benefits of developing an NPS-sponsored caching activity**

Caching activities such as EarthCache programs provide parks an avenue through which to connect with other parks and to develop partnerships with outside agencies. They may also be used to provide the public with the opportunity to learn about the park's natural and cultural history and the challenges facing public land managers. Imagine, for example, teaching the public about the negative impacts of invasive species by guiding them to areas overcome by non-native plants.

Such activities also provide an opportunity for a wide array of interpretive programs designed to address park themes. They offer the opportunity to encourage protection of resources through understanding, without the structure and requirements of formal ranger-led programs. Visitors can participate in an interactive program on their own schedules. The cost of maintaining an EarthCache program can be substantially less than traditional forms of non-personal interpretation like self-guided hikes and wayside exhibits; text on the Internet can be changed immediately and with minimal cost (e.g., staff time). In addition, because there is no need for high-profile structures, GPS-led interpretation offers preservation of landscapes and scenic vistas in a manner that traditional wayside exhibits do not.

### **The future of caching activities in national parks**

The advent of new technologies like GPS programs couldn't come at a better time for the National Park Service. Despite a rising population in the United States, visitation to national parks has been declining since 1987. This decline can be attributed to several things, but social scientists generally agree that increased time spent on the Internet, watching movies, and video gaming takes away from time spent outdoors. A recent study by the Kaiser Family Foundation reveals that children today spend more time watching and interacting with media than most adults spend at work.<sup>5</sup>

Caching activities such as EarthCaches reach individuals who may not have an outdoor mindset, an interest in hiking, or an appreciation for national parks, but *do* have interest in technology, problem-solving, exploration, and game-playing—components of EarthCaching. The introduction of EarthCache programs to NPS sites could, therefore, serve multiple purposes and address the needs of several audiences. These programs invite and encourage visitors who may not otherwise be interested in national parks, provide a resource-friendly form of geocaching in the park, and distribute park messages and knowledge about park resources. EarthCache programs can build relationships between federal agencies and the geocaching community that support the mutual interests of resource protection, exploration, and learning.

In the end, the National Park Service will surely benefit from sponsoring caching activities.

**Endnotes**

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