Geological Treasure-Hunting

Learning from textbooks? Certainly not for players of "geocaching" – i.e. several million people across the world who absorb geology-related knowledge by looking for places and objects according to clues left by others.

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Geocaching is an international outdoor game that combines alternative tourism and orienteering with the use of GPS devices. The objective is to find caches hidden by other players. Coordinates for their locations are posted on geocaching websites, along with hints and clues as to their exact whereabouts. Caches are often used to highlight various local attractions and encourage visitors by providing historical, biological, and geological fun facts about the nearby area.

It started in Oregon

The Global Positioning System (GPS) was originally designed for military applications, so the satellite signals were initially degraded to prevent civilians from determining the exact positions of specific objects. President Clinton signed a decision to discontinue the degradation of signals on 2 May 2000, thus enabling all users to determine positions within around 10 meters. On the very next day, Dave Ulmer decided to hide a large container in the woods just outside of Estacada, Oregon. He placed various objects in the box to spark people's interest and made the location of the "treasure" publicly available. What happened next surpassed his wildest expectations. In less than a day, the box was found by around 15 individuals, who shared their experience on an online forum for GPS enthusiasts. That was how geocaching was born. Inspired by Ulmer's idea, other enthusiasts of the game quickly started placing their own caches and posting their coordinates, which led to the emergence of special websites for geocaching enthusiasts. One of the first such websites was geocaching.com, launched on 2 September 2000, which now offers the largest database of geocache listings from all over the world. It includes over 2.7 million listings and has nearly 7 million users who search for hidden caches.

In 2004, the Australian geologist Gary Lewis came up with the idea of creating the "EarthCaches" geological puzzles. Eleven years later, the caches become officially part of an educational program of the Geological Society of America. The educational value lies in the form of the caches: here, they are not physical objects like containers or boxes. Rather, coordinates draw the players to various places of interest such as caves, geysers, faults, anticlines, inactive quarries, rocks, minerals, and fossils. The underlying idea behind the EarthCache program is to encourage users to visit unique geological sites. These include not only such marvelous locations as the Grand Canyon in the United States and the Paradise Cave in Poland. The value and significance of such sites are self-evident, but they are relatively rare. There are a lot more locations whose unique nature is subtler and less conspicuous, but their geological value is nonetheless equally impressive. It is worth stressing that this is the only type of caching that involves sometimes situating "caches" in protected areas.

Compared to traditional caches, EarthCaches have several advantages. First of all, they cannot be destroyed by accidental finders, because they are not physical objects (such as containers). Secondly, they include descriptions that help users solve the puzzle. In order to find the sites, the users must read the clues carefully, thus learning something new. Questions that underlie the concept of EarthCache focus exclusively

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on the local details of an object. It is impossible to find them using Google, so the players must visit the sites and try their hand at solving geological puzzles.

EarthCaches in Poland

In 2012, EarthCaches were a rarity in Poland. Listings were published by foreign reviewers, chiefly from the United States (GeoAware). For that reason, the descriptions of the puzzles sometimes included errors. That was noticed by the journalist, cacher, and geology enthusiast Leo Walotek-Scheidegger, who also works to popularize better understanding of geology. The caches he created took things to a whole new level: they included pictures, reliable descriptions, and interesting puzzles. Walotek-Scheidegger also kept looking for professional support from an institution studying the Earth sciences, which ultimately led to cooperation with the Polish Geological Institute – National Research Institute in Warsaw. In 2014, the Institute become the second official supporting organization of the EarthCache program in the world, after the Geological Society of Australia. Since that time, most of the geocaches in Poland have relied on the findings of the studies conducted by the Polish Geological Institute's staff.

The Institute was also involved in preparations for the first European EarthCache Mega-Event, a meeting of cachers from all over the world held in Poland in June 2014, after three previous events had been organized in the United States. The event in Zabrze had a strictly geological character and was related to the Guido Coal Mine and the Carboniferous Period. The next meeting was held in 2015, again under the auspices of the Polish Geological Institute. It promoted the placement of 30 new geocaches (in the Janów, Mstów, and Olsztyn).

Since the creation of the first EarthCache, Poland has ranked fourth in terms of the number of caches, after the United States, Germany, and the Czech Republic. Polish caches are gaining growing recognition among players, which in turn impacts on the economic growth of the regions visited by new tourists. The high quality of Polish EarthCaches has sparked the interest of many people who not that long ago still perceived geology as nothing more than an obscure and complicated science. ■

The authors (also known in the cacher-world as "enzonegro" and "Mroczny Lord Vader") would like to express their thanks to Leo Walotek-Scheidegger for providing invaluable assistance and materials used in this article.

Photo 1:
The authors out in the field

Photo 2:
A meeting of "cachers" at the Geological Museum of the Polish Geological Institute – National Research Institute in Warsaw

Photo 3:
The stand of the Geological Museum during an event in Olsztyn

Further reading:

www.geocaching.com
www.eartcache.org
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