

# Geocaching in Austrian National Parks

Claudia Hödl

University of Natural Resources and Life Sciences, Vienna  
Institute of Landscape Development, Recreation and Conservation Planning (ILEN)



## Keywords

Geocaching, national park, impact, disturbance, Austria, GPS

## Summary

Geocaching is a leisure activity that started in the year 2000 in the USA. Its goal is to find containers (so-called geocaches), that are hidden in cities or in natural areas, by the help of GPS-receivers or smartphones. The information required to find a cache, based on GPS-data, is uploaded to geocaching websites by the person who has hidden the cache. In the year 2000, the website *geocaching.com* was created explicitly for this purpose. In addition to other major websites, such as *opencaching.de* and *navicache.com*, there are also numerous smaller websites and databases dedicated to geocaching today. Since its beginnings, geocaching has evolved into a versatile hobby with increasing popularity worldwide. The most popular countries for this outdoor recreation activity are the USA, Germany, and Canada. But Austria also belongs to the top ten countries worldwide for the number of active geocaches (GROUNDSPEAK INC. 2013).

This development raises concerns from an environmental protection point of view, since geocaches are often located off-trail in protected areas (BROST & QUINN 2011) and since leaving the designated trails has the potential to impair the natural environment by negatively impacting vegetation and soil or by disturbing sensitive wildlife (HAMMIT & COLE 1998<sup>2</sup>; HÜPPOP 2005; INGOLD 2005; GUTHÖRL 2006<sup>2</sup>; PATUBO 2010). Given the ongoing popularity of geocaching, park managers and outdoor recreation researchers discuss the possible impact of, and ways for regulating, geocaching, especially in protected areas (REAMS & WEST 2008; BROST & QUINN 2011; PARKS CANADA 2017; FLORIDA STATE PARKS N.D.; STATE OF CALIFORNIA N.D.).

Against this background, this thesis examines the question to which extent geocaching is present in the Austrian national parks. This assessment gives an overview on the current situation, which is a valuable basis for developing any regulating measures, should they be considered necessary. For this purpose, an online research as well as GIS-based analyses were conducted to determine important parameters, such as the types of hiding places and their surroundings, the numbers of finds (period of recording: 1 June to 30 November 2012), and the distances of the hiding places from the nearest trails. In addition to the total number of finds logged for each cache during the period of recording (Figure 1), also the weekly number of finds was documented for each cache.

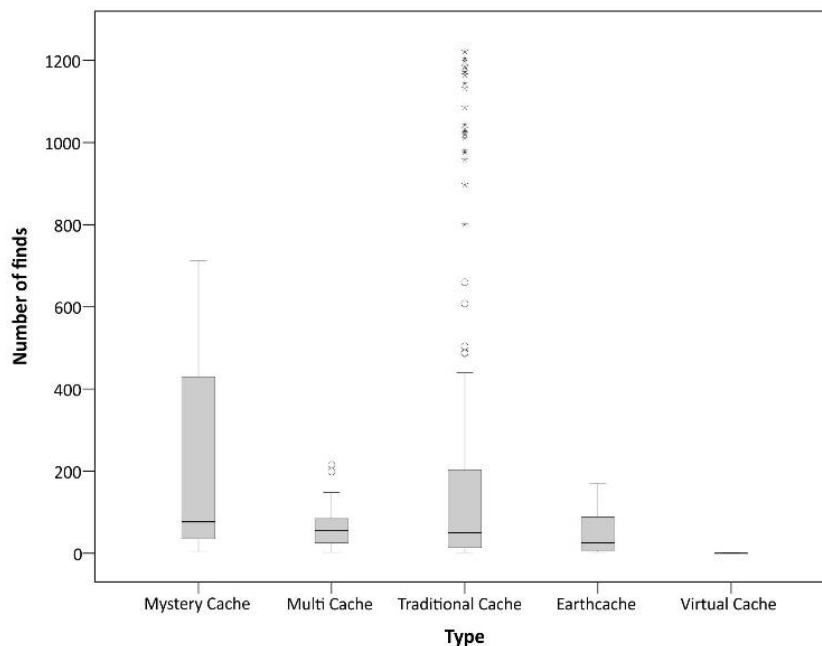


Figure 1: Number of finds in relation to cache types (N =259).

The results show that geocaching is present in all six Austrian national parks (IUCN Category II), but to rather varying degrees. It was also discovered that natural objects/structures are most commonly used as hiding places and that they are mainly located in natural areas. Regarding the distances of the hiding places from the trails and the numbers of finds, there are rather big differences between the individual national parks. At the same time, geocaches hidden in the same national park also show a wide range of results for these parameters.

In general, it seems to be necessary to keep an eye on the situation, respectively to take a closer look at it. This applies especially to the Donau-Auen NP, which is confronted with the highest number of caches and finds amongst all Austrian national parks.

A paper largely based on the results of this master thesis, but not exclusively limited to them, was published this year in the journal *eco.mont*:

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## Contact

Claudia Hödl  
[claudia.hoedl@boku.ac.at](mailto:claudia.hoedl@boku.ac.at)  
University of Natural Resources and Life Sciences, Vienna  
Institute of Landscape Development, Recreation and Conservation Planning (ILEN)  
Peter-Jordan-Straße 65  
1180 Vienna  
Austria  
<http://www.rali.boku.ac.at/en/ilen/>