

Managing geocaching in a protected area – what actions were taken in the Donau-Auen National Park, Austria over the last three years?

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Introduction

Geocaching, a leisure activity in which the recreationists try to find containers (so-called geocaches) based on coordinates, has proven to be popular in Austria and is even taking place in the country's protected areas such as national parks. Previous analysis, based on desk research only, has shown that the Donau-Auen National Park, which is partly located within the boundaries of Austria's capital city of Vienna and which is under a large amount of public use pressure (Arnberger and Hinterberger, 2003; Tazcanowska, Arnberger and Muhar, 2006), is most heavily affected by geocaching amongst all six Austrian national parks, both in terms of the number of caches hidden as well as in terms of the number of visits logged online (Hödl, 2013; Hödl and Pröbstl-Haider, 2017).

Due to these findings, each cache hidden in the national park was visited and evaluated in 2015. The results have shown that, although a large share of caches are located within relatively small distances from the nearest trails, some of them require walking off-trail for longer distances or even climbing trees, which is both not in line with desired visitor behaviour. Also, damages to woody vegetation, mostly caused by nails and wires used to attach geocaches to trees, were found quite frequently (Hödl, 2016).

Altogether, these findings strongly suggested the need for appropriate management actions to regulate geocaching within the park.

Method & results

Based on the results of the field work performed in 2015, park officials of the Donau-Auen National Park decided to take a closer look at the situation and to identify those geocaches that needed to be removed. Additionally, it was decided to implement measures to raise awareness amongst geocachers visiting the park about the potentially negative effects of their hobby on the natural environment.

Awareness raising

A set of geocaching guidelines was developed, consisting of 16 rules for proper geocaching behaviour within the park's boundaries. These guidelines include information about natural structures that are not fit to serve as hiding places (e.g. burrows, crevices and hollows in trees), appeals to stay on the designated trails, not to take shortcuts between different geocaches, not to search for geocaches during the night or at dawn, to leash dogs at all times (sometimes they actively help with searching for a geocache and are referred to as "cache dogs") as well as to pay attention to all signs present along the trails and to act accordingly. In addition, they also address the geocache owners by asking them to include a note in the online cache listing informing fellow geocachers that the cache is located in a national park and that they should be careful with regards to their natural surroundings when searching for it. Geocache owners are also asked to give a clear hint and/or to provide so-called spoiler photos in order to prevent people from intensely searching for the cache in an extended area.

These guidelines were completed in late 2016 and meant to be published online, either in a full or reduced version. As of May 2018, the guidelines are yet to be found on the park's official website.

Identification of geocaches that need to be removed

Foresters of the national park were tasked with identifying those caches that needed to be removed in their eyes. This was performed separately for caches located in areas that fall within the competence of the city of Vienna and for those within the responsibility of the province of Lower Austria. Whereas the forester responsible for this task for the Lower Austrian park areas marked all caches needing removal in an excel spreadsheet, the forester(s) managing the Viennese parts of the national park crossed them out on printed maps.

All in all, this evaluation lasted from 2016 to 2017 and resulted in the identification of 56 problematic geocaching sites in Vienna and 8 in Lower Austria.

Updating the current number of geocaches within the national park

To assess the current number and exact locations of geocaches hidden within the national park the operators of the biggest geocaching platform worldwide, geocaching.com, were contacted and asked to provide a list of all caches hidden in the park as well as in possible future expansion areas. The provided excel spreadsheet was then cross-checked with the list from the 2015 field work.

The results show that by February 23rd 2018 a total of 307 geocaching sites (hiding places and stages alike) were located within the defined area. In comparison to 2015, this means an increase of about 1 %. Although 61 new cache sites were recorded (50 caches and 11 stages), a total of 49 sites (40 caches and 9 stages) have been archived since 2015, resulting in a more or less stable total number of cache sites over the last three years.

Some of the archived caches were amongst those identified for removal, leaving 53 active problematic cache sites by February 23rd 2018 (45 in Vienna and 8 in Lower Austria). But this number may increase again since most of the 61 new cache sites still need to be evaluated by the national park foresters.

Contacting geocache owners about the removal of their caches

In a next step, park officials are planning to contact the owners of all geocaches that need to be removed via the online platform geocaching.com. They have created their own official geocaching account for that purpose in early 2018 and prepared an according information letter for distribution. Contacting the respective cache owners should take place over the course of 2018.

Conclusions

Although geocaching is certainly not the biggest challenge the Donau-Auen National Park is facing (Arnberger et al., 2012), it still is an important factor for visitor management since it may encourage people to walk off-trail and impair sensitive areas by doing so. The results show that there are various actions that can be taken to make an attempt at regulating geocaching within the park. But how effective strategies like awareness raising by publishing behavioural guidelines and contacting geocachers about the removal of problematic caches are going to be remains unclear for the time being since these measures have not been implemented yet. This may be due to the different administrative bodies respectively

provinces involved in the park's management, which may be a factor impeding fast decision making, as well as due to limited resources and the multitude of other tasks park officials are charged with resulting in a lack of time that can be dedicated to managing geocaching.

References

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