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C/O Prof. Dr. Wolf Geppert
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Reykjavík 15. June 2018
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Subject: Research permit – Hverfjall crater

The Environment Agency received an application from prof. Dr. Wolf Geppert, on behalf of Stockholm University, dated 29th of May 2018, regarding a permit to collect research samples on Lúdent and within the National monument of Hverfjall (Hverfell), from the 9th until the 17th of July 2018.

Hverfjall was protected as a national monument on the 22nd of June 2011, cf. regulation no. 1261/2011. According to the terms of protection it is prohibited to disturb or cause damages on geological features within the protected area and no traffic is allowed on the outside slopes of the Hverfjall Crater except on marked footpaths on the northeast and south sides.

Description of the project:

The project applied for is to establish which factors (oxidation/age, rock porosity, mineralogy, exposure to wind/microclimate) are most responsible for biodiversity and habitability in these volcanic environments. The infield instruments needed for the project are a portable XRF spectrometer, other spectrometers, laser thermometers and GPS devices. Very small amounts of alcohol for disinfection of sampling equipment might be used. 25 samples weighing 50 grams each at the craters Hverfell and Lúdentarskáli will be collected. The samples will be collected from the surface or near the surface only. A hole of 50 cm depth and 20 cm width will be dug in the middle of the inside of the crater to assess the depth of microbial growth. Four holes of 20 cm deep and 15 cm wide holes will be dug between the middle of the crater and the rim. This will be done avoiding any damage to plants (if such are present). The holes will be completely covered after the operation. The use of the samples will be for scientific purposes only. No commercial exploitation of the samples or the scientific results will be made. The samples will mainly be analysed in Iceland, Sweden and the USA. The sampling will be led by scientists with experience in such field work. Extreme care will be taken not to change or even damage the environment. During the sampling it will be necessary to depart from marked trails to get access to sites free from human contamination. No driving in the sample sites will be done and no motorised equipment is planned to be used in the sampling sites. Seven people will be working on location.

Impact assessment:

According to the terms of protection it is prohibited to disturb or cause damages on geological features within the protected area and no traffic is allowed on the outside slopes. The crater has high value of protection and is one of top tourist destination in the area.

The sampling will affect the term of disturbing geological features. Advisor at the Mývatn Nature Reserve concludes that the sampling at Hverfjall Crater will not leave unacceptable or permanent trace on site. If the sampling is done early morning or away from the main mass of visitors, the sampling should not affect the regular day traffic.

Conclusions and conditions:

The Environment Agency of Iceland hereby grants a research permit on its behalf on following conditions:

- Keep the signed permit letter with you at location during the research.
- If the dates of the project change the Environment Agency shall be notified, with at least 5 days notice, if possible. Otherwise as soon as possible.
- The Environment Agency requests that the ranger will be contacted before starting the project and inform him on your intentions.
- The permit is valid for the period 9.-17. July 2018.
- This permit is valid for 25 samples weighing 50 grams each at the Hverfjall crater.
- This permit is only valid for research purposes. It does not include permit to utilize the samples for commercial purposes. The samples cannot be signed over to third party for commercial use.
- No traffic is allowed on the outside slopes of the Hverfjall crater except on marked footpaths on the northeast and south sides. Sampling must therefore be done on the inside slopes of the mountain itself, inside the crater, or in the open fields around Hverfjall.
- All traces should be well covered after the collecting of samples.
- If sampling on the outside slopes of Hverfjall are necessary, please contact the advisor of the protected area for further advise.
- The Hverfjall crater is a popular tourist site. Please follow the terms of protection and show a good example to others.
- Every measure should be taken to avoid damage to the sites and unnecessary disturbance while collecting the samples.
- All participants in the project must wear high-visibility clothing during field work, labelled with the identity of the researcher or the research institute.
- Crew members should always stay on authorized paths as much as possible.
- Fauna, geological formations and landscape should not be disturbed.
- All disturbance to animals and wildlife is prohibited.
- Off-road driving in Iceland is strictly prohibited.
- The Environment Agency should be informed if there will be any changes to the project description.
- The project's staff is required to prevent all disturbance to the environment and make sure that all litter is removed from the sites.
- A sign saying that a permission for the project has been obtained from the Environment Agency should be put up.
- The permit conditions should be introduced to the staff before the work begins.

- All traces of the work must be removed carefully off the site by the end of the work/project.
- If any complications occur during the project, please contact the ranger or the Environment Agency of Iceland, tel. +354 591 2000.

Lúdent (Lúdentarskáli) is not a protected area and is therefore not within the jurisdiction of the Environment Agency. A permission from the landowners might be needed for the research.

Exporting the specimen is subject to a permit from the Institute of Natural History (www.ni.is).

Request:

The Environment Agency of Iceland wishes to be secured, free of charge, a copy of all reports and scientific articles that results from the research project.

Permission fee:

The Environment Agency of Iceland charges a fee for processing applications for permits in protected areas on the basis of Article 92 of Act no. 61/2013 on Nature Conservation. The fee is 39.400 ISK according to art. 24. b. in the agency's tariff no. 535/2015.

Supervision:

The Environment Agency will supervise the project. The supervisor will be a ranger from the Environment Agency.

Sincerely



Sigrún Ágústsdóttir
Director



Davíð Örvar Hansson
Advisor

