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**Subject: Research permit for sampling in Blábjörg and Teigarhorn natural monuments**

The Environment Agency of Iceland has received a request from the Department of Earth and Planetary Science, Northwestern University, USA, dated, 4th August and updated 25th of October 2016, regarding a permit to collect rock samples within Blábjörg natural monument and eventually also within Teigarhorn Natural monument (and country park), for a period of time in June-July 2017 (exact dates to be confirmed).

**Description of the project**

The purpose of the project is to analyze the calcium and strontium isotope composition of basalt, hydrothermal calcite, and zeolites, especially heulandite.

The team will need to access sites where minerals can be collected. There will be no need to drive off roads, but as noted above, there will be a need to travel by foot off paths to reach sampling sites.

The goal is to collect ca.4 samples total. The applicant states also that it might be likely to collect sufficient samples outside the protected areas, they are requesting a permit just in case we need to enter the reserves to collect samples.

They have an Icelandic correspondent, Mr Kristján Jónasson, working at the Icelandic Institute of Natural History. Other members of the expedition are: Dr. Tobias Weisenberger, ISOR, Dr. Weisenberger, a zeolite specialist. They have additional advice from Dr. Marin Gasser working at Breiðdalssetur.

**Impacts on nature and its minimization**

The grabbing of samples (palm size or smaller), will be taken from outcrops using a rock hammer and a chisel. No power tools will be used.

It is planned to hike outside paths, though, whenever possible on durable surfaces, for example on exposed rocks rather than vegetation.

When hiking on sensitive surfaces, the applicants suggest to walk in single file lines to minimize impacts on vegetation. All materials brought into the sample site, including waste materials, will be brought out and disposed of properly.

### **Regulations and code of conduct in the areas**

Blábjörg natural monument comprehends an area with a rare minerals (Berufjörður acid tuff) and is 1,49 hectares in size. The regulation (auglýsing nr. 250/2012) that establishes the natural monument states in Art. 4: „It is forbidden to upset or damage geological formation in the natural monument“. There regulation does not allow the Agency to grant a permit as an exception to the rule.

Teigarhorn natural monument covers a coastal area rich in zeolites. Teigarhorn is also a country park that covers more area. The regulation (auglýsing nr. 417/213) that establishes the natural monument states in Art. 6 that „it is forbidden to damage rock formations, including any kind of inscriptions, and it is forbidden to upset zeolites as they come from the outcrop. Also it is forbidden to take zeolites outside the protected area without the permission of the Environment Agency of Iceland. The zeolites found on the beach should be taken by the supervisor and preserved within the protected area. Every rock found within the protected area belong to the landowner. Construction that could result in a disruption and/or destruction of zeolites or strata rich in zeolites, is prohibited. Furthermore, any construction is prohibited without the permission of the Environment Agency. In assessing whether a permit should be granted, the Environment Agency assesses the risks...“ Also in this case the law does not allow the Agency to give permission as an exception to the rule.

### **Evaluation and conditions**

The Environment Agency of Iceland concludes, in accordance with the opinion expressed by the Natural History Institute, that the research sampling will not cause considerable damage to the site if the following conditions are fulfilled. The permit is hereby granted to collect samples in Blábjörg and Teigarhorn natural monuments, with the following conditions:

- The permit is granted for a period of 4 days within the months of June or July 2017.
- The researchers expedition must contact the ranger of Teigarhorn and communicate the dates of sampling, well before the crew arrive in Blábjörg and Teigarhorn. Also the end of the sampling must be communicated.
- The sampling should be conducted when there number of visitors is at minimum.
- The crew leader takes the signed permit during the sampling and informs the rest of the crew about the conditions and the code of conduct.
- Sampling quantity is restricted to 4 samples of minerals, palm size or smaller, taken with rock hammer and chisel only when strictly necessary, and without the use of any power tools from the outcrop as described above.
- This permit is valid only for research purposes. Samples should not be utilized for commercial purposes, nor can be signed over to third party for commercial purposes.
- The crew takes every measure to minimize the damage to the sites, including unnecessary disturbance while collecting the sample.
- The members of the crew will stay away from bird nesting areas.
- Off road driving is prohibited in all circumstances.


The Environment Agency notes the following:

- A separate permit from the Icelandic Institute of Natural History [ni@hi.is](mailto:ni@hi.is) to take minerals out of the country is needed.
- The landowner, who is also the supervisor of the Blábjörg Natural Monument must also grant his permission and be informed before the crew's arrival.
- The Municipality of Djúpivogur, who is the supervisor of Teigarhorn country park and natural monument must be informed before the crew's arrival.
- It is in the interest of the Agency to receive a copy of the results of the research in the protected areas under its supervision.

The Environment Agency of Iceland charges a fee for processing applications for permits in protected areas in accordance with the art. 92 of law nr. 60/2013 (the Nature Protection Act). The fee is 39.400 ISK. The invoice will follow this permit.

The supervision of the enforcement of this permit will be conducted by the local ranger, during its working time and therefore is free of charge. The hourly rate is 13.200 ISK per hour if the sampling is executed during the weekend or outside the day time.

Sincerely

  
Kristín Linda  
Director



René Biasone  
Specialist