



Arkivsaksnr: 2022/7100-0

Sakshandsamar: Marthe Gjerde

Dato: 18.05.2022

Utval	Utvalssak	Møtedato
Jostedalsbreen nasjonalparkstyre	19/22	20.06.2022

Jostedalsbreen National Park - permission for geological sampling - Potsdam University

Recommended decision from the administration

Post-doctoral researcher Dr. Maxime Bernard at Potsdam University is granted exemption to perform sampling of rocks for scientific research in Jostedalsbreen National Park. Permission is given for a maximum number of 9 rock samples as shown in maps attached to the application. Exemption is given pursuant to Nature Diversity Act ('naturmangfaldlova') § 48.

The permit applies with the following conditions:

- The permission is granted for the period 20 June to 31 October 2022.
- A total number of maximum 9 rock samples are granted.
- Sampling must be done with special care, as to minimize negative impact on the landscape.
- Rocks shall not be sampled from exposed, flat areas, and the applicant should leave as little scars in the landscape as possible. Preferably, samples are extracted from cracks or similar features already present in the landscape.
- In those cases where digging is necessary, vegetation must be put in place after sampling.
- Rock samples shall not be extracted closer than 30 meters to any eventual hiking trails.
- Each sample may be up to 4 kg rock.
- All sample localities shall be documented with photographs showing before and after sampling and GPS coordinates. This information shall be presented in a report that must be sent to the Board of Jostedalsbreen National Park, which shall also be informed when the fieldwork is completed - jostedalsbreen@statsforvalteren.no
- All litter shall be carried out of the national park.

We inform you that you also need a permission to extract samples from any relevant property owners before the field activity is initiated.



Saksprotokoll i Jostedalsbreen nasjonalparkstyre - 20.06.2022

Handsaming i møte

Vedtak i samsvar med innstilling frå forvaltar.

During the meeting: Fully agreed in the Board Meeting.

Vedtak

Decision:

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Background

Relevant documents:

- E-mail from Dr. Maxime Bernard with request for information, dated 4 April 2022
- Application for field work with attachment: "Proposal for sampling rocks in the Jostedalsbreen National Park, Norway", dated 5 May 2022



- Regulations for Jostedalsskogen National Park, dated 25 October 1991
- Nature Diversity Act ('naturmangfoldlova'), dated 19 June 2009

The application

The administration for the Board of Jostedalsskogen National Park received a request for information about regulations regarding sampling rocks within the national park from Dr. Maxime Bernard, a post-doctoral researcher affiliated with the ERC Project COOLER at Potsdam University on 4 April 2022. Dr. Bernard is part of a European research project where they aim to unravel the link between glaciations and climate cooling observed in the Quaternary, through erosion of the topography. Regarding this goal, they wish to sample rocks around the main fjords in Norway to better understand how glacial erosion is spatially and temporally distributed, and to unravel the long-term (few million years) development of the Norwegian landscape. For this, they use a dating technique called thermochronology that enables them to constrain the past dynamics of the topography.

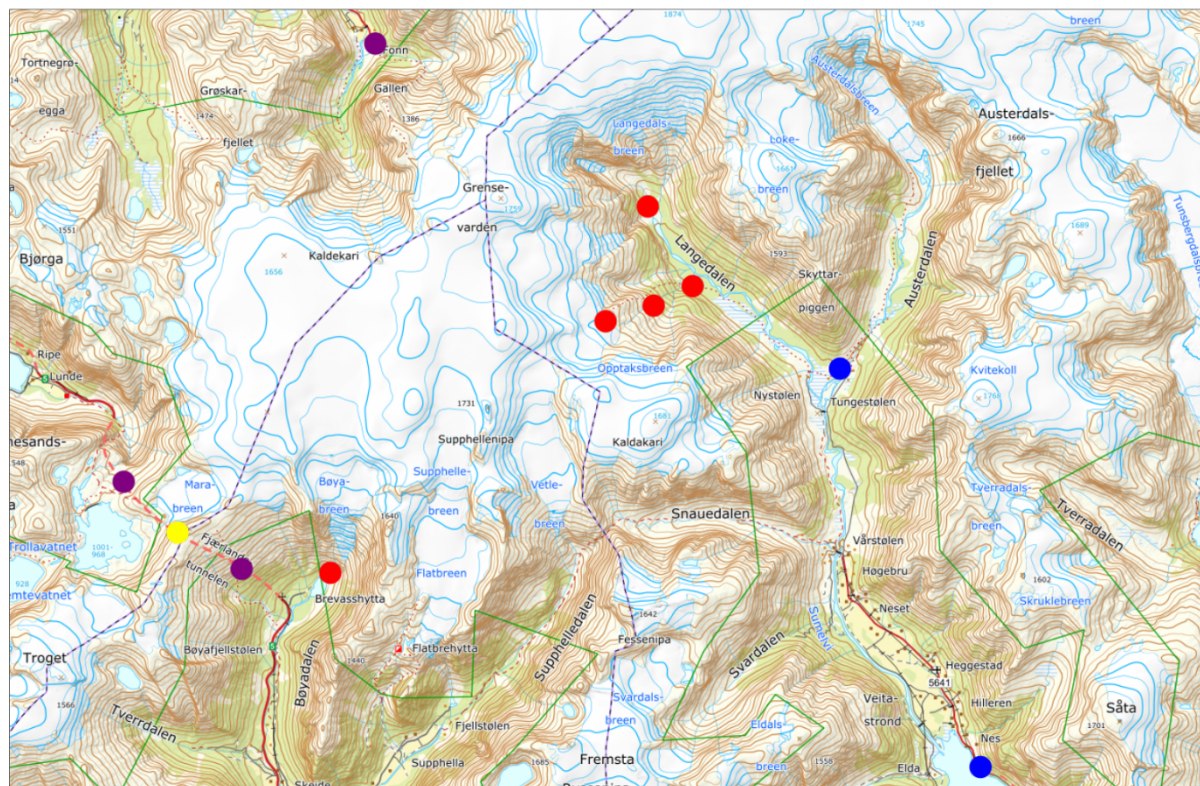
On 5 May, Dr. Bernard and colleagues sent a formal application with a proposal for sampling strategy and an overview of proposed sample localities marked on maps. They wanted permission to conduct fieldwork in several locations within, and outside of, the national park. A total of 9 (marked as red dots in Maps 1 and 2, see below) of the 17 targeted, as well as 4 (marked as yellow dots) of the 9 optional samples are placed within the national park's borders. The review of the application will therefore include only the samples that they wish to extract from within the borders, where the National Park Board holds authority. For the remaining samples outside the national park, shown as blue dots (targeted sample sites) and purple dots (optional sample sites) in Maps 1 and 2, the individual landowners must be requested for permission.

The research group will work in the area around Jostedalsskogen between 19-26 July 2022. The sampling locations are shown in Maps 1 and 2. In total, the research team aim at collecting 9 samples within the borders of the national park (red dots in Maps 1 and 2), with 4 samples in option (yellow dots) in case some of the targeted locations prove inaccessible for any reason. The optional samples will in that case substitute other samples so that the total number of collected samples is limited.

Dr. Bernard and colleagues write:

"Each sampling site target apatite-bearing lithologies such as gneisses and granites that mostly outcropping in the area. For each, we will collect up to 4 kg of rocks using hammers to ensure enough amount of apatites resulting from the mineral separation process. We will reach sampling sites by car up to where it is possible. The remaining distances will be travelled by feet."

There is no need of motorized transportation for the necessary field work.

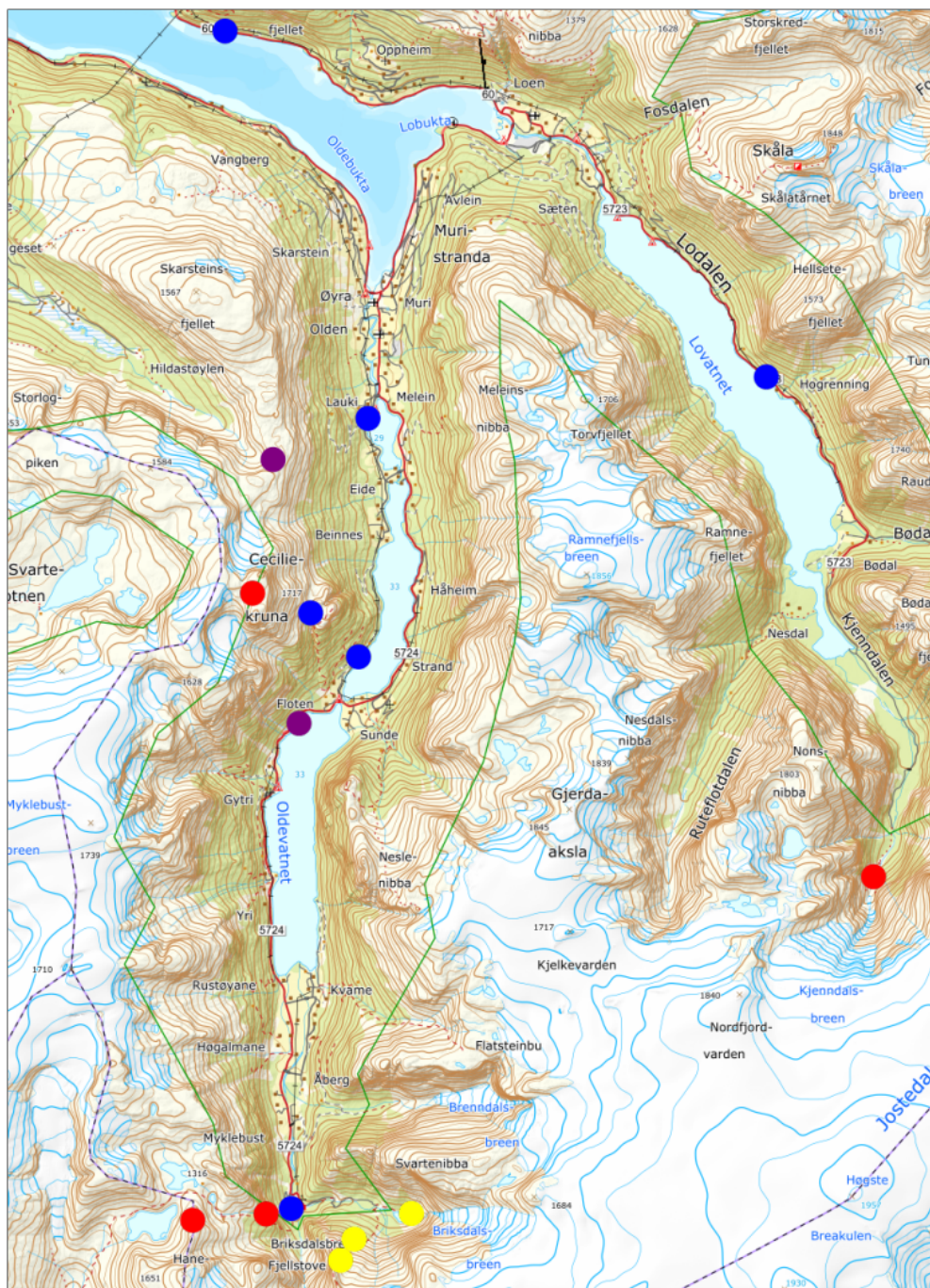


Senterposisjon: 68611.08, 6849012.48
Koordinatsystem: EPSG:25833
Utskriftsdato: 18.05.2022

0 1 2 3 4km

Kartverket

Map 1: Proposed sample localities southern part. Red: Targeted sample sites inside the National Park (NP). Blue: Targeted sample sites outside the NP. Yellow: Optional sample sites inside the NP. Purple: Optional sample sites outside the NP. Green solid line denotes the NP.



Senterposisjon: 71319.08, 6875542.42
Koordinatsystem: EPSG:25833
Utskriftsdato: 18.05.2022

0 1 2 3 4km



Map 2: Proposed sample localities northwestern part. Red: Targeted sample sites inside the National Park (NP). Blue: Targeted sample sites outside the NP. Yellow: Optional sample sites inside the NP. Purple: Optional sample sites outside the NP. Green solid line denotes the NP.



National Park regulations

With respect to regulations within the national park, it is basically forbidden to break loose rock and minerals (cf. section IV):

"[...] Det er forbode å bryte laus stein, mineralar eller fossilar. [...]"

Any exemption must be provided by the Nature Diversity Act ('naturmangfaldlova'; nml) § 48 (exemption from a protection decision), and in this particular case, by the first paragraph, first alternative:

"The administrative authority may grant exemption from a protection decision if it is not contrary to the purpose of the protection decision and cannot make a significant impact on the conservation value, or if safety considerations or important public interests make it necessary." (our underlining).

The applied dispensation from the protection regulation for Jostedalsbreen National Park must be treated by the general exemption in nml § 48, first paragraph, first alternative. This edict set two conditions for when a dispensation can be given. The applied action shall not affect the conservation values noticeably, and the action must not go against the goal of the protection.

This edict is a so called can-edict, which means that a concrete evaluation is made of whether or not a dispensation shall be given if the conditions are met. When deciding if a dispensation will be given, an individual evaluation is made looking at magnitude, environmental effect, and necessity of the applied action. Dispensation will only be given in cases where the effects on the conservation values are insignificant or restricted.

The applicant is responsible for necessary permissions from landowner(s).

In processing the application with nml § 48 one must also consider the environmental principles in nml §§ 8 – 12.

Consideration

A permission will have to be granted according to section 48 in the Nature Diversity Act, which replace the National Park statues, pt. VI.

According to the Nature Diversity Act, section 48, an exception from the national park regulations can be made if the activity is not ambivalent to the purpose of the national park, and as long as it will not substantially influence the nature. The purpose of Jostedalsbreen National Park is, among others, to protect a large, varied, and valuable glaciated area with its associated areas stretching from lowlands to high-altitude mountainous regions, with its flora and fauna and geological features in original condition. Also, the national park shall be a place for simple outdoor life. From the national park regulations, chapter III:

«Føremålet med nasjonalparken er:



- å verne eit stort, variert og verdfullt breområde med tilhøyrande område frå lågland til høgfjell, med plante- og dyreliv og geologiske førekomstar i naturleg eller i det vesentlege naturleg tilstand.[...]» (our underlining).

The geology in the national park is an important objective to the protection of the area and must therefore be preserved. This particular application may be compared to a former application for rock sampling for thermochronological purposes that was permitted by the National Park Board in 2018, case no. ST 26/18. It is there assessed that the volume of rock samples permitted is relatively small enough to not inflict 'notable influence' on the natural environment. In case ST 26/18, a total number of 7 rock samples up to 3 kg/1 L each was permitted. The application from Dr. Bernard involves up to 2 more samples with a maximum of 9 samples, yet, the administration assess that the total volume applied for is well within reasonable amounts and that the sampling will not affect the conservation values noticeably. Conditions are met and nml § 48 may permit a dispensation. The legal basis for a permit is present, and one must further assess if it is professionally advisable to permit a dispensation.

The sampling strategy is to collect up to 4 kg of rocks using hammers to ensure enough amount of apatite resulting from the mineral separation process. This amount is 1 kg more per sample than applied for in the aforementioned case, ST 26/18. The administration assess that for this particular application and subsequent laboratory procedure up to 4 kg of rocks at each of the 13 localities should be allowed. Samples should be collected from outcrops where there are cracks or similar features already present. The administration further encourage that sampling sites are carefully selected and leave as little scars in the landscape as possible, and sampling should not be conducted from exposed, flat areas. Likely, there will be scars in the landscape from this, but the marks will likely be small, not clearly visible, and only visible from a short distance. There is no need of motorized transportation or motorized tools for the necessary field work.

The knowledge base for this application (cf. nml § 8) is satisfactory. The applicant has written a thorough proposal with maps showing how and where the sampling is to take place, as well as explaining the scientific rationale behind the research project. It is not expected that the sampling will affect vulnerable nature or conservation values. The precautionary principle in nml § 9 needs not be emphasized.

According to nml § 12 one shall avoid or limit harm to the nature diversity based on operating method, technique, and localization that based on a collected evaluation gives the best results for the community. Dr. Bernard and colleagues has chosen sample localities within the national park's border due to geological circumstances and will apply only hand power and hammers when sampling. The administration set terms that flat and exposed areas that are easily visible sites for visitors to the national park, shall not be sampled, as well as terms of photographic documentation of all sample sites. Nml § 12 is met.

Rather, one should stop and consider nml § 10, which involves ecosystem approach and total load of both the applied-for action as well as potential future applications. One must then assess the potential precedence of a permit; if one applicant is allowed something, others must thereafter be confident that they are also allowed similar permits. Previously, sampling for this particular methodology has been allowed, but in smaller volumes. Nevertheless, the administration finds the amount of rocks applied for here tolerable and not



forming any potential problematic precedence at a later point in time. Nml § 10 is thus assessed and met.

According to naturmangfoldlova § 11 it is the part initiating an activity that has to cover the cost to avoid or limit harm to the nature diversity the activity may cause. This is not of relevance here.

Scientific research in Jostedalsbreen National Park is permitted. In the management plan for Jostedalsbreen National Park scientific research is regarded as valuable in order to increase knowledge of nature, with a precaution that the activity does not impact the conservation values. In this case I evaluate the impact on nature as small, and the advantages of the research as exceeding the disadvantage for nature, as the impact will be small, and the terms set establish that any eventual scars in the landscape should be kept to a minimum. Knowledge produced in this project will give valuable insight on the evolution of the landscape and geology (which is part of the purpose of the protection) of the national park. The exemption from the regulations is given pursuant to nml § 48 and does not conflict with nml §§ 8-12. The administration therefore advises to permit the application.