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KVARTÄR GEOLOGI

ALLMÄN OCH HISTORISK GEOLOGI

NATUR GEOGRAFI

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Cover photo, front: Alexander Wallén in a newly blown tunnel section. Photo by Cecilia Nilsson.
Cover photo, back: A signpost from Bergslagen. Photo by Mikaela Krona.

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Re-revival of Berg & Dalbladet

*Mikaela Krona**

Berg & Dalbladet was published by Geologklubben between 1981-2004. In 2014, it was attempted to revive the publication, but unfortunately it did not work out. Now, more than 15 years after the discontinuation, it is time for Berg & Dalbladet to return. We aim to publish 4 issues a year and we will distribute it via mail to Geologklubbens members and it will be available to borrow and read as a paper copy. The printed version will primarily hang at Geologklubbens board in U1. From now on, the paper will be published in English but articles in English or Swedish are accepted.



Fig. 1: A boulder hosting large garnets, from the excursion to Rimbo 2020.

The past two years have been difficult for everyone, but nonetheless we were able to carry out two excursions for our members. In october 2020, we had an excursion to Rimbo where we saw Sweden's maybe largest garnet porphyroblasts (fig. 1). The excursion was held by Alasdair Skelton, who guided the participants between the outcrops and demonstrated chemical measurements of the garnets in-situ by using XRF (X-ray fluorescence).



Fig. 2: A vein of zircon where the crystal structure is heavily affected by radioactivity, from the excursion to Ytterby 2021.

In october 2021, we organised an excursion to the quarry of Ytterby located on Visingö close to Vaxholm where Joakim Mansfeld and Susanne Sjöberg talked about the history of the mine. Ytterby is known as the place where several elements were discovered, including Yttrium which is named after the mine. One of the highlights of the excursion were the fascinating radial radiation damage zones around Uranium

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bearing minerals (fig. 2).

In the coming year, we hope to offer our members more excursions and many pubs. At the moment, we are planning an exciting excursion in late spring. More detailed information will be announced shortly.

Additionally, we are happy to announce that the date for Burn's night is set to Friday the 18/3! We invite you to a night of ceilidh, whisky, haggis and live music by FATS. Be ready to dance all evening. We will announce Burn's night via mail and posters as soon as all planning is finalised. To get information as soon as it is available, stay tuned on Facebook and Instagram as well as sign up to our mail list.

Don't hesitate to grab one of the board members if you see one of us in the building, if you want to ask a question or have a suggestion for a theme on a future pub or excursion.

We look forward to seeing you all in the building!



Fig. 3: A boulder in the Alps.

Introducing the board of Geologklubben



Fig. 1: Vidar, chairman.
Master student at IGV, writing his master thesis in structural geology.



Fig. 3: Sandra, treasurer.
Master student at IGV, reading courses in geology.



Fig. 2: Robert, vice chairman.
PhD student at IGV, investigating critical metal mobility in the Bergslagen mining district.



Fig. 4: Elise, secretary.
Bachelor student at IGV/Natgeo, writing her thesis in structural geology.



Fig. 5: Mikaela, communicator.
Master student at IGV, doing an internship and taking courses in geology.



Fig. 7: Voula, board member.
Master student at IGV, writing her master thesis in geochemistry.



Fig. 6: Kevin, club master.
Visiting researcher from Stonybrook University at IGV. Working on alteration styles surrounding ore deposits in Bergslagen.



Fig. 8: Daniel, board member.
Master student at IGV, writing his thesis in marine geology in the Arctic.

Bergslagen excursion in Ore Geology (GG8117)

*Kevin Hatton**

Professor Iain Pitcairn's Ore Geology course included a weeklong field excursion to explore and better understand the rich history of Sweden's Bergslagen ore province through visiting mines, abandoned and active, as well as various outcrops along the way. We began with Falun Gruva, Sweden's most historic mine, where we examined the scale of intense alteration zoning at this Volcanogenic Massive Sulfide (VMS) type deposit.



Fig. 1: Listening to Iain's explanation of the features in the outcrop.

Next day we visited Stollberg Gruva where the stratigraphy was very emphasized. The active mine of Lovisa Gruva was the following day which was hosted by the tight team working there. The Durchbewegung (Ball Ore) texture of the Galena and Sphalerite mined there is due to the generations of folding on the less competent sulphides which brecciate and round quartz within the units.

The fourth day we visited historic Riddarhyttan, where many of the Rare Earth Elements (REE's) were first discovered, such as Cerium (Ce) and Neodymium (Nd) to name a few. The final day we visited Zinkgruvan which is the same type of formation as Lovisa, a stratiform Zn-Pb-Ag deposit, but is significantly larger. We were allowed to enter the mine to the depth of 1.1km, examine and also collect samples from freshly dug tunnels which was truly spectacular.



Fig. 2: Down at 1.1km in Zinkgruvan.

If you have the opportunity or interest, I highly recommend this course.

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An excursion amongst the marmots of Avers, Juf

*Vidar Jakobsson**

One early morning in late July, I woke up with an exciting feeling and a promising smile on my face. My journey was going to start today. I quickly dragged myself out of bed, grabbed my bags, kissed my girlfriend goodbye, and left my apartment. I had this weird feeling that I had not felt in a long time. The feeling you get when you finally get to do that one thing you have been longing for. I was on my way to the airport for my first real excursion, where besides the first four days, I would be completely alone in a foreign country for about two entire weeks. The flight went by quickly as I processed the mystery ahead of me.

When I arrived in Switzerland, Uwe, my supervisor was waiting to pick me up so we could drive down to Avers, Juf. As we were driving through Switzerland it was impossible to not just enjoy the view. Especially driving up the Avers valley, the landscape was just spectacular and remarkably different from Sweden: Steep hillsides with bedrock outcropping making the dip of the lithological layers distinguishable from a long distance. Making for a valley with distinct mountain-ridges on both sides, extenuated by the river cutting sharply into the middle of the valley. Eventually, we reached the end of the Avers valley, to the small town of Juf (fig. 1).

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Fig. 1: The village Juf in Avers valley.

It was a beautiful green valley with mountain hillsides covered in grass with sharp mountain peaks tops viewable from the base. Cows were walking around with their dangly bell hanging around their neck, creating a musical undertone to the Alp experience. Unfortunately, the musical undertone was accompanied by harsh rain, pouring down on us as we were running with our gear from the car to the house I would stay in. Later that day, the sky cleared up and we strolled around a bit enjoying the view before going back inside to discuss the fieldwork I was going to do.

The next morning, we went straight out in the field despite the harsh weather, which neither of us particularly enjoyed. As we were walking into the very end of the valley, I stopped once I heard a weird sound. A



Fig. 2: The rusty-red peridotite.

high pitch scream, almost like a bird, but it was not. It was one of those marmots that covered the entire valley. These funny little creatures stand on their small grass hills, just over the hole they live in, and just stare at you. They stare until you come close enough, then they scream a couple of times before escaping into their hole. And after you have passed them, they reappear, continuing the stare-down.

Anyhow, when we had reached the first outcrop at the end of the valley, Uwe started teaching with his signature moves, you know as he usually does. Making hand gestures to emphasize the observable features within the rock, and when asked questions he would, for a moment, stare into the nothingness before answering the question. Perhaps, the brilliant, experienced professor reached into the depths of his brain's filing system to try to find an answer a poor unexperienced master student could comprehend. The most surprising thing with the Juf Gabbro (the meta-gabbro that I was working on) was that it was white. Whitish-turquoise to a greenish-yellow colour. I had expected the mafic rock to exhibit a darker, or mafic look to it.

Nevertheless, the fieldwork ended quickly for the day it was pouring down, and the mountainsides got dangerously slippery. These four initial days would continue like this, on the sunny days we were able to reach the mountain peaks, whereas the rainy days ended too quickly. At last, I was left alone with the peculiar marmots. What struck me the most of Avers, Juf, was at the top of the Juf-gabbro, lied a large, massive, and undeformed peridotite. The contrast between the whitish meta-gabbro with a highly deformed foliation, and the rusty-red, dark-green peridotite body was nothing like what I had seen before (fig. 2). Another unforgettable memory was the scenery at the peaks, at around 2900-3000 meters you could just see everything. The entire mountain chain was exposed in front of your eyes.

Everything down the valley looks so damn small, and up there, one could philosophize about how the geology of the valley fit together. Needless to say, the excursion was a mind-shaping experience. It is truly fascinating what an excursion does to one's soul, it cleanses oneself by realizing how small you are compared to what you study. That is why I study geology.



Fig. 3: The beautiful scenery of the Alps.

Excursion to Ytterby

*Robert Dunst**

Even if I didn't know where Ytterby lies until I moved to Sweden the name has been familiar to me since school times. I remember that I was asking me what this word means which gave 4 elements their name. And as I understood that it is the name of the place where 9 elements have been discovered I decided to go there once. On October 30, 2021, it was finally time to go there. The geology club organised a trip to this quarry which lies only ca. 15 km northeast of Stockholm on the island of Resarö. Early in the morning our first group of ca. 10 took the bus from Stockholm to Resarö where we met our guides Joakim Mansfeld and Susanne Sjöberg, who both conveyed enthusiasm on this fascinating place which still holds many mysteries yet to be investigated.



Fig. 1: Detail of the rock from Ytterby where scientists centuries ago discovered Gadolinite.

On the way from the bus to the quarry Susanna Sjöberg gave us an introduction to the history of Ytterby. The quarry opened in the 17 th century and produced quartz and feldspar for the local glass and china manufactures. Only more then 100 years after that early natural scientist discovered strange previously unknown minerals at the place with an unknown composition. One of the minerals was named Gadolinite and would be the source for the discovery of several different elements by the small international community of chemists (fig. 1). In material from the Ytterby quarry the elements Ytterbium, Yttrium, Terbium, Erbium, Gadolinium, Holmium, Thulium, Scandium, Lutetium and Tantalum were first analysed and described.

As we listened to this introduction and walked towards the quarry the names of the streets started to change to elements after passing Yttriumvägen vi arrived at the quar-

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ry. At first I was surprised by the small scale of the visible pit. All we could see was a small ca 4m deep pit of maybe 10 x 30 meters. But as we saw the huge, pink feldspar crystals (ca. 30 cm) and beautiful radial sunlike structures in the walls of the quarry this first disappointment was forgotten. Joakim Mansfeld gave us a short talk about the geological background of the place. The quarry follows an approximately vertical north south striking body of very coarse-grained rock called pegmatite which cuts the older rocks in the area.

Pegmatites form from the last remains of melts which on their way crystallised igneous rocks as e.g., granites. These melts are therefore depleted in elements which make up the minerals that crystallised at depth (e.g. Fe, Mg which form olivine in earth's mantle). On the other hand, they are enriched in elements which are incompatible with the crystal lattice of the crystallised minerals. These are for example volatiles as H, O, C (in water and carbon dioxide) or Large or high charge ions as Li, La, Rb, Ba, U, Ti. Because this melt is strongly diluted



Fig. 2: Radial fractures (caused by radiation) surrounding a spot with uranium bearing minerals.

by fluids as water and carbon dioxide the crytallisation will take longer and single mineral crystals can grow to larger sizes, as for example the dm scale feldspars in the quarry. The Ytterby pegmatite is special since it hosts very rare minerals in unusually big crystals. These include Fergusonit, Gadolinit, Tengerit and Yttrotantalit which contain most of the rare elements which were first described here. Minerals containing radioactive elements like Uranium caused radiation damage in the surrounding pegmatite which can be seen as radial fractures (fig 2).



Fig. 3: The excursion group listening to the geological background presented by Joakim Mansfeld.

The younger and probably less known part of the history of the quarry was explained to us by Susanne Sjöberg. Long after the quarry was closed, after second world war the Swedish national force used the quarry as mineral oil storage facility. The quarry was covered with a thick concrete ceiling which is the ground we were walking on during the excursion. The oil wasn't stored in closed tanks but filled directly into the quarry, with the idea that the groundwater would make a protective layer around the oil. This has however not really worked to plan, oil penetrated into the rock why the water running out of the fractures in the quarry has to be pumped out since the closing of the oil deposit in 1995. Susanne Sjöberg studied this place from her Bachelors on until her PhD. Starting with classical geology in her Bachelors and ending with an interdisciplinary PhD studying Rare Earth Element bearing minerals which occur at the walls of underground tunnels from the Oil deposit.

If you are interested in the topic I strongly recommend to have a look at the BSc thesis and maybe the PhD theses of Susanne Sjöberg.

1. PhD thesis:
https://www.diva-portal.org/smash/get/diva2:1365156/FULLTEXT01.pdf

2. Bsc thesis:
https://su.diva-portal.org/smash/get/diva2:580742/FULLTEXT03.pdf

As both our guides emphasiced the quarry would have great potential for several future BSc and MSc theses. If you are interested don't hesitate to contact Joakim Mansfeld or Susanne Sjöberg.

A week in Greece

*Sandra Morawiecki**

Just before the outbreak of Covid-19, my classmates and I were lucky enough to travel to Peloponnese, Greece with the course "Project in Physical Geography, 7.5 hp", which is a course focusing on learning to write a scientific report about a landform which has not been affected by ice and glacial processes, as is the case for most of Sweden.



Fig. 1: The Taygetos Mountains.

The landforms we were investigating were sand dunes, badlands, terraces and coastline erosion, and all the field work was performed close to the Navarino Environmental Observatory (NEO), which is a collaboration between Stockholm University, the Biomedical Research Foundation of the Academy of Athens (BRFAA) and the Tourism Enterprises of Messinia S.A. (TEMES).

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Navarino exhibits a beautiful landscape which is part of the Kalamata fault. Besides field work we also visited Lousios Potamos waterway and the Taygetos Mountains around Sparta (fig. 1). This course is very good if you want to learn to write a scientific report. It was fun to do the planning of a hypothesis and then doing fieldwork together in groups.

My group got to investigate badlands, which got their name from being rather difficult to traverse. It was a landform I had never seen before, so doing fieldwork there was very interesting. After a day in the field, we spent the evenings playing with the kittens that were visiting the observatory or went to the beach for a refreshing swim in the sea! And we also ate a lot of tasty, local oranges, one of which you can see me munching on (fig. 2). It was an excursion with many fond memories!



Fig. 2: Enjoying the view of Voidokilia Bay while eating an orange.

En arbetsdag på Bergab

*Alexander Wallén**

Dem flesta inklusive mig själv har funderat på vart man hamnar som geolog, finns det ens jobb? Kommer jag trivas? Vad gör man? Hamnar man på kontor eller är man fast med fältarbete? Ingen verkade kunna ge tillfredsställande svar på dem frågor vi hade. Men efter att en av kurskamraterna fått praktik blev jag själv erbjuden en plats som praktikant, en portal in i arbetslivet som geolog.



Fig. 1: Kartering av en nysprängd sektion av tunneln.

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Arbetsuppgifterna är många och varierande, jag började jobba inom hydrogeologi, som funktionstestare av grundvattenrör. Detta involverar att vandra runt och lyfta på brunnslock, inte speciellt lockande, men väldigt lugnt arbete. Detta ändrade sig snabbt när jag började på bergavdelningen, som just geolog.

Inspektioner av befintliga tunnlar, involverande bomknackning och kartering av skador. Ytkartering av plansprängda berghällar, bestämmelser av förstärkning, framtagande av rapporter för diverse problem samt alldagliga kontorsuppgifter. Som sagt arbetsuppgifterna är många och kräver mer än en novell att gå igenom.

Det som fastnade för mig var just Entrepenadgeolog, en kartör av tunnlar, den personen som bestämmer hur och vart det ska förstärkas, självklart, inom rimliga ramar. En vanlig dag kan många gånger beskrivas som kaotisk, få dagar jobbas mellan dem mänskliga 8–17. Vanligare är 05:00-15:00-18:00 och allt där emellan. Oftast så jobbar man i skift eller med beredskap, under skift arbetar man en till två veckor och är ledig den nästföljande.

Med beredskap så jobbar man som vanligt, fast man måste vara beredd på att åka in dem obekväma arbetstiderna, ifall det skulle behövas. Miljön kan vara stressig och pressad men trivs man i tunnlar så lär man älska jobbet. Och som en bonus får man

vara med under sprängningar.

Viktiga kunskaper att ta med sig från geologiutbildningen är bland annat strukturgeologi, berggrundsgeologi, och sen hur man räknar ut RMR och Q, vilket vi använder dagligen. Självklart blir man även upplärd på jobbet så känn ingen stress. Ta chansen att praktisera då det är det lättaste sättet att få in en fot i arbetslivet. En masterexamen behövs inte men körkort är att föredra.

Just nu är vi inne i en gyllene tid för just geologer och dess arbetsmöjligheter, med en ljus framtid inom just infrastruktur och bergarbeten.

Alexander Wallén
Student på IGV
Entrepenadgeolog på Bergab



Fig. 2: En nysprängd del av tunneln.

Volker Brüchert

Associate professor of Biogeochemistry

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Fig. 1: Volker Brüchert

What is your research area?
I am a marine biogeochemist. If that doesn't tell you much, it is a surprisingly old (over 100 years) discipline within the geosciences that deals with the influence that biology has on the chemistry of our environment, whether that is by plants, animals, or microbes. In my case, it is mostly about the role of microbes in sediment and seawater and the way the processes carried out by microbes interact with their physicochemical aquatic environment. The interactions control, for example, how greenhouse gases exchange between sediment and the seawater, or the seawater and the atmosphere, but they also control oxygen levels in the ocean and nutrient availability for life. Applied aspects of biogeochemistry are therefore important regarding both climate change and environmental pollution, but there are many insufficiently understood fundamental science aspects to explore as well.

What made you choose geochemistry?
I started as a geologist that wanted to do field work and chemistry. I have a strong appreciation for quantitative work, so combining physics and analytical chemistry with geoscience suited me well. I learned more about microbiology and biochemistry during my postdoctoral period, when I had the opportunity to work at a world class research institution, the Max-Planck Institute for marine Microbiology. Working there for over 10 years has had a profound influence on my scientific career direction.

What courses do you teach?
I teach our introductory course Basics of geochemistry, our practical course Field and laboratory methods in geochemistry, and the M.Sc courses Biogeochemistry and Applied environmental geochemistry. Apart from that I contribute to the courses Global Geochemical Cycles and the MISU course Global Biogeochemical Cycles.

What are you working on right now?
Mainly I am currently working with three doctoral students. In one project, we explore the release of carbon dioxide, methane, and nitrous oxide from the inshore waters of the Baltic Sea to the atmosphere. The global importance of the coastal inshore belt for greenhouse gas release has not been quantified very well, yet at the same time it's the coastal waters that are in direct reach to the action of half the world's population. Integrating the dynamics of these emissions into global budgets is of key importance.

Similarly important is my second project - working on a temporally and spatially constrained assessment of material exchange between the seafloor and the overlying water – the bottom boundary layer. Studying this environment requires measurement technology that works underwater and at best continuously. Implementing autonomously operating technologies at the seafloor is of key importance in this project.

About the third project: There is no question about the importance and diversity of microbial life on our planet. Microbes are ubiquitous on the surface of the Earth, the ocean, and in the ocean bottom. There are also unexpected observations, for example of microorganisms that are seemingly out of place with their environment. We have discovered bacterial spores in the sediments of the Baltic, but also in the high Arctic that don't seem to be doing much there, but they can be woken up and best like it hot – 50 to 60ºC, if they could choose! What are they doing there in the places we find them? How did they get there? Where are they from? And what does this tell us about how microbial life spreads around Earth, maintains itself, and adapts. These are fundamental questions to be answered about the interactions between the physicochemical environment of our planet and life.

Tell us a non-geology fact about you!
I like being outdoors and spend a good amount of time kayaking in the Stockholm archipelago, and I also like alpine skiing, on and offpiste. I am a certified leader in the Friluftsfrämjandet and organize one day to week-long paddling tours of various levels of difficulty in the inner and outer archipelago or on Åland.

What do you look forward to in 2022?
Needless to say, I am looking forward to a post-pandemic life, professionally and privately. For 2022, my PhD student Jonas Fredriksson and I have planned long-term measurements with our benthic observatory system off Askö. We want to study the dynamics of oxygen in the bottom waters by coupling turbulence measurements with continuous chemical monitoring and we are planning a set of experiments to study the release and removal of the greenhouse gases methane, carbon dioxide and nitrous oxide in the bottom boundary layer. This will be quite work-intensive, and involve both field- and laboratory-based work. We need support and look forward to new members joining our team to work on Askö.

Helen Coxall

Associate professor of Marine Micropaleontology

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Fig. 1: Helen Coxall

What is your research area?
My expertise is in fossilized foraminifera, tiny (50-400 mm) biomineralizing marine protists whose calcium carbonate (CaCO3) shells accumulate in vast thickness across extensive areas of the ocean floor. These rich, quasi-continuous foram-baring archives represent, arguably, the highest quality fossil record of any biological group.

Utilizing this resource, I conduct research in the field of marine Cenozoic micropalaeontology and palaeoceanography, harnessing an ever-increasing range of techniques to provide novel insights into ocean-climate history, climate system forces and feedbacks, and the coupling between climate and pelagic ecosystems through critical events of the past 65 million years.

What made you choose marine geology?
I loved science at school but I did not know what area to focus on at university. Medicine? Biochemistry? Environmental Science? Geological sciences, broadly, is the perfect blend of biology, chemistry, physics and environmental science that helps us address and explain everything natural that we see around us, why mountains, oceans and forests are where they are, why some countries are rich in mineral wealth and have good farmland, while others don't, how the different countries came to have the characteristic flora and fauna that we are familiar with. It gives a long-term history of these things, including how they have and can change. This perspective helps us predict what will happen in the future.

I ended up specializing in marine geology once I discovered that the deep sea contains the best and most continuous records (mud layers) for unraveling climate-change patterns in the past, and even how organisms evolve or go extinct to in response to climate and ocean change. Most people don't know that the hidden mud layers at the bottom of the sea hold all these secrets.

What courses do you teach?
I lead or contribute to:

1. Introduction to Geology and Geophysics (I teach the parts on introducing rocks, geological time, palaeontolo-

gy and sedimentology, (lead excursions to Gotland/ Närke)

2. The Sedimentary System (lead the excursion to Västergötland)

3. Palaeoceanography and Marine Geology (lead the excursion to the International Ocean Discovery Program Repository in Bremen)

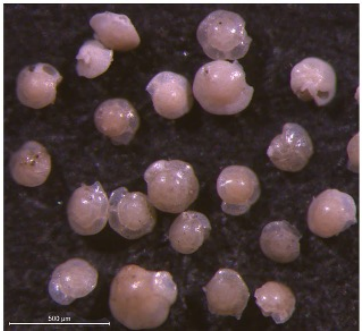
4. Critical Events in the Evolution of Earth and Life (Distance)

I also teach lectures in the Masters courses Isotope geology and Palaeontology.

What are you working on right now?
I am working on a paper about the coupling between pelagic evolution and global cooling during the Eocene period (40 million years ago), and a second paper on the invasion of the Arctic Ocean by warmwater species during previous interglacial periods.

Tell us a non-geology fact about you!
I love swimming in the ocean and live music.

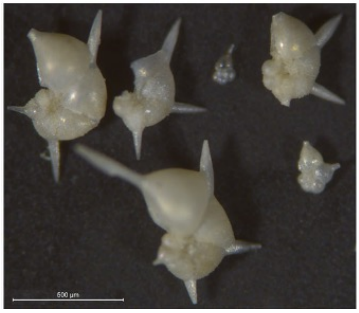
What do you look forward to in 2022?
Finishing the building of our family Attefallshus (we are doing it all ourselves and its taking too much time!). Finally getting to see friends and family again around the world after 2 years of being grounded.



(a)



(b)



(c)

Fig. 2: Picked foraminifera

Crossword: Minerals

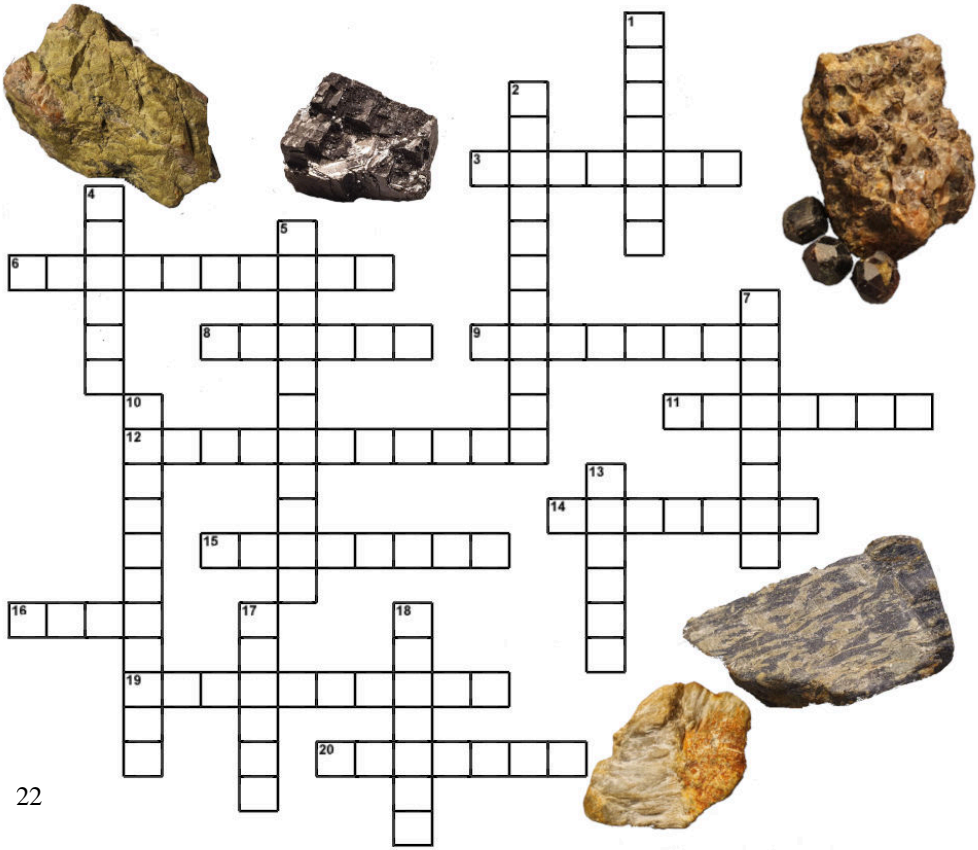
Difficulty level: Petrologist

Across

3. Na-rich pyroxene
6. Na-rich white mica
8. Lead-rich
9. Indicates greenschist facies
11. High-P polymorph of graphite
12. 60% anorthite
14. Extremely high interference color
15. Diamond-shaped in thin section
16. Softest mineral in Mohs scale
19. Cross in thin section
20. Yellow-green metamorphic

Down

1. Brown, common in granite
2. Indicating subduction zones
4. Common iron sulphide
5. High-T polymorph of kyanite
7. Non-magnetic iron oxide
10. Feldspar in mafic rocks
13. Often observed as a porphyroblast
17. The most common mineral
18. Dominates the mantle



Get involved!

Submitting article to Berg & Dalbladet

Are you interested in submitting an article for the next volume of Berg & Dalbladet?

We accept all types of articles, as long as they are somehow related to Earth sciences. Your article may inform of new research findings, your abstract from your thesis, an anecdote from an excursion or about your own experience as a student, enthusiast or researcher. The article may be in English or Swedish and will be published in the language the author has submitted. Send your article to geologklubben@gmail.com and assign Berg & Dalbladetas subject.

We look forward to reading your submitted article!



Fig. 1: The Geoscience building during spring.

Join Geologklubben

An annual membership in Geologklubben costs 100SEK and by being a member you get four copies of Berg & Dalbladet per year emailed to you and free entrance to our excursions.

You can pay the membership fee via Swish to 0737043030 (Mikaela) or via Plusgiro: 40 29 33 - 6 (Geologklubben).

Alternatively, you can pay by cash during one of our pubs.

Become a boardmember

Are you interested in joining the board of Geologklubben? We are always looking for new boardmembers! Geologklubben arranges excursions, pubs and activities for our members on a monthly basis. It does not matter if you are a geographer, petrologist, geomorphologist or a hydrologist, Geologklubben is open to anyone part of the Earth science community.

Contact the board

If you want to come into contact with the board, send us an email or a DM on Facebook or Instagram. You can also talk to us if you see us running around the building.

Email: geologklubben@gmail.com
Facebook: Geologklubben
Instagram: geologklubben_su

List of figures

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