



## Department of Geology



### *Editorial Team :*

SAKSHI PARWAR ( SECOND YEAR), MELDRIN AFONSO (SECOND YEAR), MCKAYLA FERNANDES ( FIRST YEAR)

2021 is upon us and with it comes the promise of great growth and change. As a part of our own expansion and growth we are excited to launch this Newsletter. Thanks to all those who have contributed towards this issue.

Wish you all Happy reading.

- Sakshi Parwar

### *Introduction of new Skill Enhancement Courses*

With the aim to impart skill based education, the Department of Geology is proud to initiate two Skill enhancement courses ( SEC) that are implemented from the academic year 2020-2021

- Operational Geology & Gemmology
- GIS for Beginners

[READ MORE..](#)

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## FACULTY DEVELOPMENT

Shri H S Nadkarni and Dr Meghana Devli attended an E-training on 'Micropalaeontology and C-14 Dating' conducted by Geological Survey of India Training Institute, Hyderabad. Dr Meghana Devli also attended a 2 day workshop on 'Universal stage: Principles and practice' organised by GSI- Western Chapter Department of Geology, Pune University.

Ms Swati Ghadi completed an online course "Remote Sensing & GIS Technology and Applications" conducted by Indian Institute of Remote Sensing (IIRS), ISRO Dehradun. She also participated in an e-training on "Fundamentals of Volcanology" conducted by Geological Survey of India Training Institute, Hyderabad.

Ms Magnolia Miranda completed 1 week online FDP on 'Quantum Geographic Information System (QGIS) organised by Don Bosco College of Engineering, Fatorda in association with Spoken Tutorial Project, IIT Bombay.

Mr Malcolm Afonso completed an online course 'Copernicus MOOC, March-May 2020, University of Luxembourg Competence Centre. He completed an online course on DRONE01x: Drones for Agriculture: Prepare and Design Your Drone (UAV) Mission, January 14, 2020, WageningenX, an online learning initiative of Wageningen University & Research.

Malcolm Afonso also completed an online course titled "Overview of Geoprocessing using Python" by the Indian Institute of Remote Sensing, Dehradun through the nodal centre at Parvatibai Chowgule College of Arts and Science Autonomous, Goa in Jan 2021.

He attended short term Web based training course on "Satellite based Flood Assessment and Modeling" under TREES (Training and Research in Earth Eco-System), an initiative of space Applications Centre (ISRO), Ahmedabad in November, 2020. He has successfully completed advance module (Track 2) of the MOOC on "Geospatial Applications for Disaster Risk Management" jointly conducted by Centre for Space Science and Technology Education for Asia and the Pacific (CSSTEAP) & United Nations Platform for Space based Information for Disaster management and Emergency Response (UN-SPIDER), Oct-Nov'2020.

He has also successfully participated in a two-day workshop on "Research Grant Writing" organised by the Directorate of Higher Education, Goa in association with Government College of Arts, Science & Commerce, Quepem Goa on 16th and 17th March 2021 at SCERT Building, Porvorim-Goa

Malcolm Afonso successfully completed 5 total hours of "Statistics for Data Science and Business Analysis" online course on January 25, 2021 offered by 365 careers and Udemy

As apart of the curriculum we, Third Year students have taken up 2 projects. The project taken up by my group under the guidance of Ms Swati Ghadi, is "Slope Stability assessment of a hillock in Vaguelem and Maina areas in Salcete, Goa". The project involves doing a slope stability assessment of the target area, LULC by mapping under-cuttings and encroachments on the slopes by the human settlements or construction activities. Furthermore, areas on the target hill are also surveyed for their stability, considering the various evidence for slope failure.

Various aspects of studies are planned, ranging from GIS interpretation of the land use and land cover, creating surface Digital Terrain Model (DTM) by extracting contours from SRTM Images to calculate slope, field visits to the area and so on.

It is with confidence that I say that at the end of our project, we shall be able to make a successful and clear analysis of the situation pertaining to the target area.

- Rakshit Vamsi

## PROJECTS



The title of our Third Year Project is 'Garnet - a variety of gemstone', this project is done under the guidance of Dr Meghana Devli. Garnet has been used as a gemstone for over 5000 years and continues as a popular gemstone even today. It serves as a birthstone for the month of January, In India it is traditionally known as 'Gomed'. It is durable and common enough that it can be used in jewellery at a relatively low cost.

Currently a number of simulants (similar looking gemstones) are seen in the market. The objective of our project is to study the various aspects of garnet as a gemstone. It focuses on the various varieties of garnet, its physical and optical properties and studying its sources. For studying these properties we are using various instruments like dichroscope, polariscope, spectroscopy, refractometer, gemmological microscope and ultra violet lamps. Through this project we shall have a better understanding of the properties of garnet which will help us to identify garnets from its simulants.

- Rati Naik

# Field study at Pallolem

*Local Fieldtrip to Pallolem was conducted on 08th April 2021 for the First Year and Third Year students of geology.. Nashville (Third Year) shares is his experience..*  
[Read more..](#)



Events

## THIRD YEAR STUDENTS WINS THE INTER CLASS FUTSAL TOURNAMENT



Matches are an essential part of sports, they give rise to competitive spirit and sportsmanship. With this thought, an interclass Futsal League was organised by and for the students of the Department of geology. The objective was to provide a platform for our students to showcase their team playing skills and stamina but more importantly provide an opportunity to get to know each other, especially for the First year students this served as an excellent ice breaker.

The group stage matches were held on 23th March 2021 during the afternoon sessions. The first match was played between First Year and Third Year, of which the Third Year won the match by 2 goals with their splendid performance.

[READ MORE.](#)

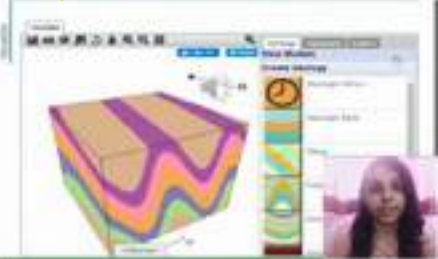
## PRERNA DIWAS

### NATIONAL SCIENCE DAY 2021

*The department of Geology had organized a video making competition for the students on the eve of Science Day 2021. The theme for the same was 'Future of Science Technology Innovation: Impacts on Education, Skills and Work'. The participants presented informational videos on geology and formation of Grand Canyon, use of geological tools like Google Earth and Visible Geology in understanding various geological concepts and brief account of Geology of Goa. A small event was organized virtually to declare the winners in the presence of all Geology professors and students.*

### Prize winners

- MS APOORVA PIMPRIKAR (FIRST YEAR) SECURED THE FIRSTPLACE.**
- MS LISA RODRIGUES (SECOND YEAR) STOOD SECOND & MR JEREMY MIRANDA (SECOND YEAR) IN THIRD PLACE**



[READ MORE..](#)

# Life of a Student In this Pandemic

BY MCKAYLA DA COSTA

Now, I'm a geology student. Few days ago, my geology teacher sent me this song called 'Lava' and said it reminded her of us, students. To give the overall gist, its a song about a lonely volcano singing his "lava" out in hopes to meet his soulmate some day. [side note: I can't believe I'm smiling over two singing rocks and a really bad pun].

I went off the tangent and did a wee bit of research to find out that these singing rocks actually EXIST! There's a place in Hawaii where a chain of volcanoes come together to form this thing called the "Big Island" and there's this little volcano under the sea called 'Lō'ihī' that is slowly going to merge with these chain of volcanoes. Like how weird is that. Like does Lō'ihī know about Big Island? And does the Big Island know that Lō'ihī is soon going to live among them??? Waah, I'm really gonna lose sleep over two rocks.

But jokes aside the life of said volcano and a student in 2021 is scarily analogous.

We're all just individual volcanoes living in our own bubble of an island as our only form of social interaction. Watching the seasons change and days fly by while our eyes remain glued to our screens. Many of us have even resorted to talking to ourselves as some sought of a coping mechanism when the silence gets too loud.

But when the feeling of isolation surpassed that of the productivity, the loneliness seeped through the cracks of our mundane routine. The bottled restlessness and anxiety erupts out every once in a while, spewing its contents all over the place.



We now really have just decided to call it a natural disaster and move on....but the cycle repeats. I can't really tell anyone to 'find strength' during this time but let's not let the sea swallow us whole. And maybe, just maybe if we keep trying and continue doing what we're supposed to be doing, our tectonic plates could just align together for us.

The only difference between the volcano and us is that I really wish we had the enthusiasm to sing everyday in hopes for our dreams to come true but our love language is blurting out random answers through the microphone of our earphones in hopes for it to be enough to get us off the hook or let out a sigh of relief when we're not called upon during class.

The panoramic has been hard that goes without saying but we can't really let that childlike spark die out. With reference to Greek mythology, at the bottom of Pandora's Box all that was left was hope after all. And Maybe we're all just like little Lō'ihī feeling suffocated by the void around us, but little do we know that there's a Big Island out there waiting to envelope us with open arms.

Until then we're just going to have to find safe mediums of self expression, continue social distancing and for the love of the earth, sky and seas please DO NOT let your nose hang off of your mask. We've been in this pendemonium for a year already! Anyway with that being said I'm gonna go listen to the song again just to get in my feels for no reason, and you should too.

[CLICK HERE.](https://io9.gizmodo.com/the-real-geology-behind-pixars-short-film-lava-1713976956) to stream the song and here is the link to the information on the Hawaiian volcanoes

*This is an outcrop at Pallolem.*

*What you may see in the image is three different rock types.*

*What a geologist sees : the dark rock, Dolerite cutting across the grey gneiss and the Beige colour pegmatite dyklet. This is classic case for understanding the " Cross cutting Principle" used in stratigraphy, that explains the relative age of the rocks.*

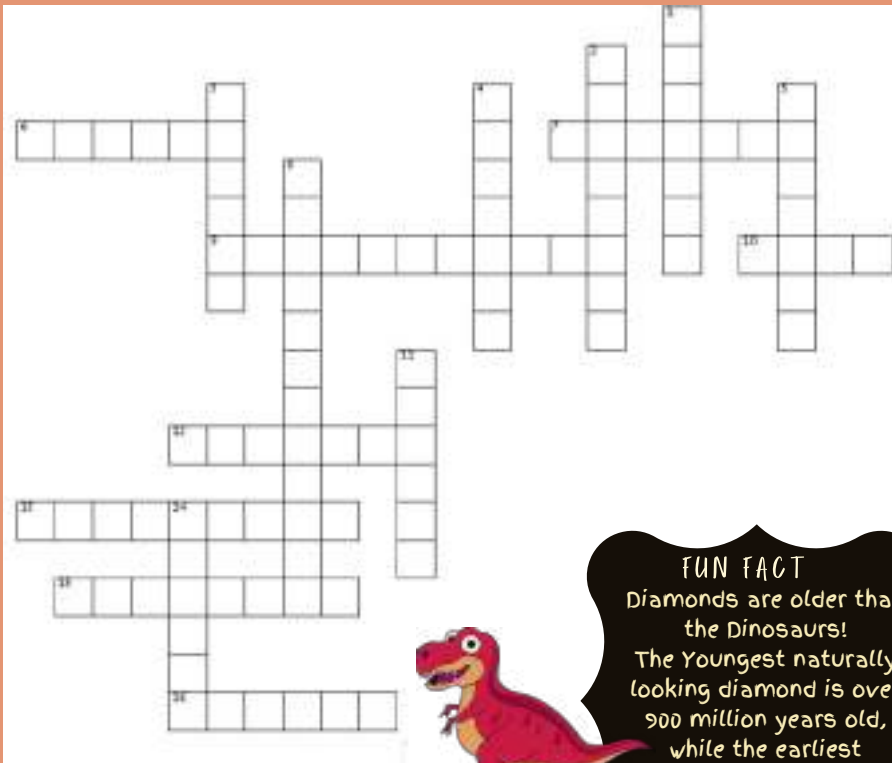
*In a simple explanation it just tells us that all the three rock types you see at this location formed at differnt times. The gneiss is the oldest rock which was later intruded by the Pegmatitic dyklet, and these together, in a different event were intruded by the younger Dolerite dyke.*

*Next time you go to Pallolem, do not forget to see these amazing structures!!*

## LOCAL GEOLOGY CORNER



# Geology crossword



**FUN FACT**  
 Diamonds are older than the Dinosaurs!  
 The Youngest naturally looking diamond is over 900 million years old, while the earliest dinosaur is estimated to be less than 250 million years old.

## ACROSS

- 6. ONE BIG LAND MASS
- 7. ACCUMULATION OF SNOW
- 9. FREQUENTLY OCCURS IN JAPAN
- 10. LONGEST RIVER IN THE WORLD
- 12. TRAVELLERS MUST-HAVE
- 13. GIANTS THAT EXPLODE WHEN ANGRY
- 15. MOST ABUNDANT ELEMENT IN THE UNIVERSE
- 16. MAGNETIC AND NOCTURNAL

## DOWN

- 1. LIQUID METAL
- 2. PHYLUM OF SNAILS
- 3. MINERAL NAMED AFTER THE SEEDS OF POMEGRANATE
- 4. DEEPEST POINT ON EARTH
- 5. WEAK PULL THAT HOLDS UNIVERSE
- 8. GOOD OZONE PRESENT IN
- 11. SUCCULENT COMMONLY SEEN
- 14. HUMANS ORIGINATED IN

## Students Achievements

RANKING IN THE GUART -  
 SCHOOL OF EARTH, OCEAN & ATMOSPHERIC SCIENCES  
 MASTER OF SCIENCE IN APPLIED GEOLOGY, GOA  
 UNIVERSITY



**SIDDHI SHIRODKAR**  
 RANK 02



**PRADNESH PEDNEKAR**  
 RANK 09

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