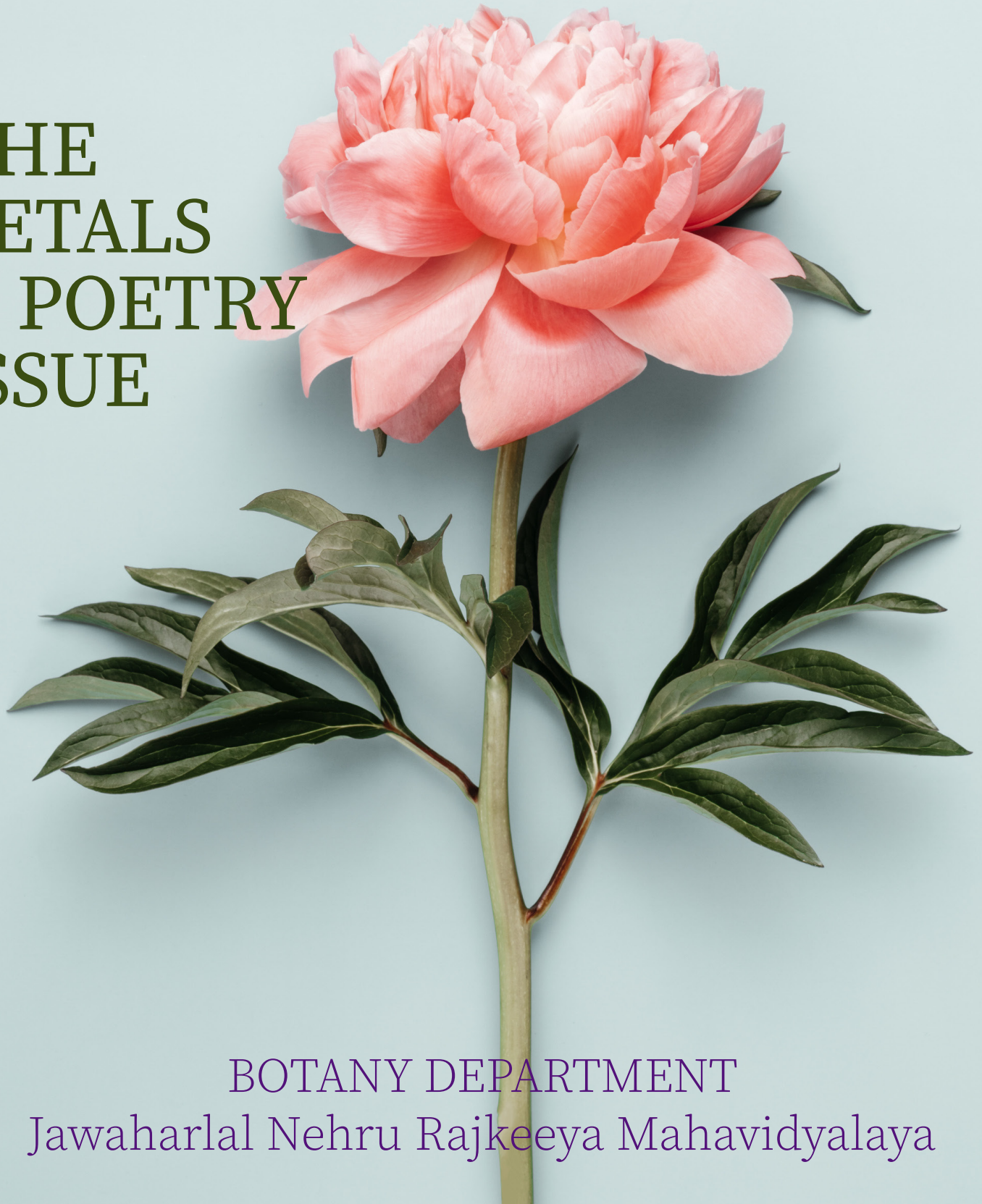


DAFFODILS

FEBRUARY 2025

THE
PETALS
& POETRY
ISSUE



BOTANY DEPARTMENT
Jawaharlal Nehru Rajkeeya Mahavidyalaya



AND
THEN MY
HEART WITH
PLEASURE FILLS
AND DANCES
WITH THE
DAFFODILS.
WILLIAM WORDSWORTH

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PRINCIPAL'S MESSAGE

It gives me immense pleasure to express my views on the release of the e-magazine DAFFODILS by the PG Department of Botany, Jawaharlal Nehru Rajkeeya Mahavidyalaya.

I extend my heartfelt congratulations to the Department of Botany for the launch of Daffodils that reflects the dedication and enthusiasm of our students and faculty. I applaud the contributors and their stimulated thoughts as well as the varied articles they have contributed.

I would like to emphasize the importance of staying committed to your decisions and maintaining a positive mindset. Keep working hard and you will undoubtedly achieve your goals successfully.

As the saying goes, "The journey of a thousand miles begins with a single step. May Daffodils continue to bloom with creativity and wisdom in the years to come.

I wish the magazine a great success!



PEARL DEVDAS
PRINCIPAL, JNRM

WELCOME

Dear Readers,

With immense pleasure and pride, I welcome you to the inaugural issue of the Botany Department's e-magazine 'Daffodils'! Through this publication, we aim to expand the scope of our wall magazine, Daffodils, to reach a wider audience. We want to celebrate the wonders of plant life and at the same time foster a deeper connection with the natural world.

As we face global challenges such as climate change and biodiversity loss, plants offer solutions and hope.

This e-magazine contributes to the conversation. With many

thought-provoking pieces, I hope that this e-magazine will inspire curiosity and ignite a passion for a greener world around us. This magazine also serves as a window into the vibrant activities of our department.

I would like to extend my heartfelt gratitude to everyone who has contributed to making this vision a reality. Your hard work and commitment have brought this e-magazine to life.

Just like the plants we study, let's continue to grow together.

Welcome to the first issue of our Botany Department's e-magazine!

Warm regards,



Dipon Sharmah

DR DIPON SHARMAH
HOD BOTANY, JNRM

ABOUT DAFFODILS

An e-magazine version of our wall magazine

BY EDITORIAL TEAM

Daffodils, the wall magazine of The Botanical Forum, Department of Botany, JNRM began its journey in 2014. It was officially launched on 21st October 2014 by Dr. C. Murugan, Scientist, Botanical Survey of India, Andaman & Nicobar Islands. This marked a special moment for us.

The wall magazine sparked creativity and curiosity among our students. Thereafter, the wall magazine was continuously published.

Now, we are excited to take this initiative a step further. With the launch of our

e-magazine, this digital version aims to reach a broader audience. This will allow us to connect with more nature and plant lovers. We firmly believe that sharing knowledge is like planting a seed—it's the first step toward growth and discovery.

With this new beginning, we look forward to creating many more e-magazines in the years to come. Thank you for being part of this journey.

Welcome to Daffodils, the e-magazine of The Botanical Forum!



THE EUPHORIC EXPEDITION

It is a great time to rejoice and thank the lord for all the good things that have been accomplished. I feel proud that I had the privilege of being associated with the Department of Botany, JNRM for five years- as a student pursuing my B.Sc. and M.Sc. courses.

At the outset, I wish to extend my sincere gratitude to the Head of the Department of Botany, JNRM for giving me the opportunity to pen down this article.

Before commencing, I wish to say a few words about myself. I am a localite, born and brought up in these pristine islands. I completed my schooling from Nirmala Senior Secondary School, Port Blair and my +2 from GSSS Lapathy, Car Nicobar.

After completing my schooling, there were various professional courses for which I was eligible. But I chose to pursue a B.Sc. Degree, as it opened many opportunities for securing a job. It was in the year 2014 that I started my college life after completing school. It is, of course, difficult for an individual to settle into a new environment, especially when the place and the people are unfamiliar. But once you find a friend, everything becomes easy-peasy, lemon-squeezy! You get a partner to talk to- oops! Not just talk, but gossip with- someone to share things with

and have fun with! One thing I must say is that “friends” are the backbone of every college journey.

It is ingrained in human nature that when you find a healthy environment, you grow and glow differently. The same happened to me during those college days - I was surrounded by good friends and great mentors (professors).

Moreover, I also received full support from my parents at home.

I was a student who didn't take schooling seriously, but after joining B.Sc., I fell in love with studying scientific events, and my determination to explore the scientific concepts behind everything on Earth increased. Most of my free time was spent in the college library rather than in the college canteen.

Plant Biochemistry and Microbiology were the most interesting subjects. The curiosity in understanding and proving things through scientific concepts increased after completing my M.Sc. degree, and it continues to this day.

Everything was fine when it came to completing notes and assignments. But the most horrible part was practical date sheets – it was nothing less than the Hiroshima-Nagasaki bomb! Drop dead! Those sleepless nights spent completing the practical files and preparing for exams are unforgettable. Such a laborious task!



You emerge as a successful individual when the factors around you influence you positively. At home, our parents are our greatest mentors and in our schools and colleges, our teachers, professors and friends play that role. I was a blessed soul who received all these throughout my education and graduation journey. It was the Department of Botany, JNRM, that gave me the opportunity to visit mainland (Tamil Nadu) on a study tour for the first time.

Those celebrations on fresher's day for every batch of freshers and the emotional moments during the seniors farewell day were all fun! Those five years of graduation felt like a blink, flying past rapidly. In the end, it was the best feeling to see myself placed in first class with distinction in my M.Sc. degree. I am overwhelmed to reflect on this great journey of five years in the Department of

Botany, JNRM, which enabled me to recognize my strengths and further gave me the opportunity to enhance them. It has helped me grow not only in monetary ways but also as a good human being and a well-informed individual.

Now, I am working as an LGC, an AC Cadre employee under the Andaman Administration. I strongly believe that it is God's calling that led me to this profession, though my ambition was different. However, I believe that God has a better plan for me.

Being from a science background, I will never stop chasing my dreams of working in the scientific field since learning has no age limit.

Finally, I extend my best wishes and prayers to every student who has passed out from the Department of Botany JNRM. May they reach great heights of prosperity, development and success in all ways.

BY T ALISHA DERICK

THE LILAC BEAUTY

In the lush and misty forests of the Andaman Islands grows a tree called Pyinma. The tree stands out for its botanical beauty!

Scientifically, it is known as Lagerstroemia hypoleuca. In 2017, it was declared as the state flower of the Andaman and Nicobar Islands.

Pyinma is a medium to large-sized tree. It is endemic to the Andaman Islands. By endemic, it means one won't find it growing naturally anywhere else in the world. It grows naturally only in these islands.

When the summer season arrives, the Pyinma tree starts to bloom. The beautiful lilac shades of these flowers are borne in

pyramid-like bunches. The tree's appearance becomes very striking. And it is an eye-catching spectacle!

But Pyinma isn't only about its beautiful flowers. Locally, it serves many practical purposes. For example, its timber is used in different purposes like construction and furniture. This tree, therefore, represents the natural beauty and cultural heritage of these islands.

So next time you are in the woods or strolling along the beautiful beaches, do keep an eye out for the elegant Pyinma - a symbol of the archipelago's rich biodiversity and ecological charm.

BY DR DIPON SHARMAH

THE REALM OF SILPHIUM

Recently, while watching a show, I came across the plant Silphium. I came to know that this plant has captured the imagination of researchers and scholars. Was it really the miracle contraceptive, aphrodisiac, seasoning, perfume and medicine as was claimed to be?

Belonging to the genus Ferula, Silphium was found in the city of Cyrene in Northern Africa about 2,000 years ago. This is modern-day Libya. Although it mysteriously vanished and has been termed extinct, other members of the genus might serve as good alternatives. During the reign of Julius Caesar, the plant was stockpiled alongside gold and was valued at the same level as silver.

According to Theophrastus the plant had thick roots covered in black bark about 48cms long with a hollow stalk similar to that of fennel or celery. Its stems were roasted; roots eaten with vinegar. The Romans mentioned the plants in poems and

referred to it as gold. It was also believed to be a gift from the Greek god Apollo.

It was used to treat a variety of health problems such as cough, sore throat, fever, indigestion, aches, pains, warts and all kinds of ailments. The connection between Silphium and the heart symbol is fascinating. It is said that due to it being so closely linked to love and sexuality the shape of the seeds inspired the traditional heart symbol.

This raises the question: Why did Silphium, which was considered as valuable as gold in ancient Greece and Rome, go extinct? According to a chronicler in 638 B.C. a supposed black rain may be the cause of its disappearance.

Did human appetite really led to the extinction of such a versatile plant just like several others or was it due to something else? There have been several reported theories as to what led to the extinction. And the mystery continues!



A coin during the reign of Magas of Cyrene, showing the Silphium plant

BY SK MUSKAN

SUMMER AND SPRING

I live in a place where summer and spring collide like two lovers who are unconditionally in love. I was never able to segregate SUMMER & SPRING in dichotomy, rather, I have always seen the two of them as one single entity, inseparable from the other, bound to be together, eternally lost in romance. To me, together they emanate a sense of a strange loveable feeling, a dream very poets dream of; content in chaos and a brief moment of solace. It might be foolish of me to say that I still do not see summer and spring quite distinctively. To me, they are like the horizon, like how it appears that the sky meets the ocean, but they actually never meet.

This is the brightest to the fullest. I see vibrant flowers standing firmly with ease and bees humming in great ecstasy. The wind carries warm air, the sky painted in its

finest azure, the clouds whiter and loftier than ever, the small streams playfully tossing through the pebbles, the meekest glint on the shallow when it is touched by the wind causing calm scintillating waves, the sunlight reflection dancing on my face and the occasional sound of the rustling leaves ...reminds me how marvelously the summer and spring lives together, reshaping my life in subtle colours of poetry contemplation.

All of these magical words are indeed a poet's delight, the nuances of every little thing often unnoticed by others, or to put it delicately in Sylvia Plath's words " the gifts for a young poet".

My forehead gets laden with trickling perspiration and the palms become oily, yet, I look for some more metaphors and realism, which I am about to amalgamate into a series of words.

*Here they come,
Summer and spring,
holding each other,
a medley they sing.
Golden sunsets I love to witness,
Flowers crowns I solemnly wear ,
Bare feet on the brown grass,
I sat with a paper and poetic flare.
Pondering and pondering,
Pursing my lips,
Toes curling,
Words reaching my finger tips.
“You two are alike,
Like the fraternal twins,
but one bestows the glaring heat,
the other just blooms and always wins.”
Unaware of the passing time,
with cavernous thoughts as i write,
the zephyr touch my feet cold,
oh dear, it is almost twilight.*

*A note to the READERS-
This piece was highly intuitive
like my other blog. I don't know
whether writing about these
fleeting feelings must come with
a purpose or not, but if you have
read it, if you have tried to
understand it, then give yourself
a moment, just to perceive how
summer in your place looks like.*

BY m for melancholia



PLANT INTELLIGENCE

Can plants think? Do they plan? Or communicate? Scientists are now seriously asking these questions. And the answer may be a yes!

*Zoë Schlanger is a climate reporter. She spent many years researching plant behaviour and intelligence. She wrote a book named *The Light Eaters*. It reveals fascinating discoveries about how plants react, how they communicate and even remember.*

Now scientists firmly believe that plants are more active and aware of their surroundings. This is contrary to what we previously believed.

Schlanger's interest in this topic grew from her work as a

climate reporter. She covered depressing stories about wildfires and ice melting. This saddened her. She wanted to explore something more hopeful. So she turned to botany and discovered exciting facts about plants.

Modern research has started showing the remarkable ability of plants to adapt, to learn and to make decisions. This has led scientists to question whether intelligence requires a brain. If plants can respond to their environment in sophisticated ways, should we consider them intelligent? This emerging field challenges our understanding of life and consciousness. It encourages us to see plants in a new light. Perhaps it's also the right time to rethink what it means to be intelligent!

THE JOY OF COLLECTING SPECIMENS

To teach biology at school, graduate or postgraduate levels, one thing that always occupies centre stage is the use of live or permanent specimens. Ask any biology teacher, and they will tell you how essential specimens are in making classes lively. Being a biology teacher, I have always been captivated by the idea of collecting specimens. This pursuit has led me to some of the most beautiful and biodiversity hotspot regions of India.

My first experience with specimen collection was during a college education trip to Darjeeling and Gangtok in the eastern Himalayas. As botany students, we collected species like Selaginella and Lycopodium. These are shade-loving plants and propagate via spores rather than seeds. From that collection, a friend gifted me a framed Lycopodium plant, which still adorns my wall! The following year, we travelled to the western Himalayas (Nainital and Almora) and collected specimens for our herbarium submission.

Later, during university days, I

contributed one tree fern, a tall fern resembling a tree, collected from Tippi, a picturesque village in Arunachal Pradesh, to the University Botanical Resource Centre. I vividly recall the 250 km bus journey from Tippi to Guwahati, with the fern carefully placed by my side. It was a joy answering the curious questions of fellow passengers and feeling the pride of being its collector. The curator of the department was excited to receive the plant.

Years later, when I secured a teaching position, my passion for specimen collection was reignited. This renewed zeal was because my posting was on a tropical island that never experienced winter. Consequently, a whole range of lower groups of plants like different moss species, Lycopodium, ferns etc. were scarce or absent from the landscape.

Conducting educational tours to high-altitude areas became the perfect solution for collecting specimens! A few years ago, during one such tour of the biodiversity-rich Nilgiri Hills (Ooty and Coonoor), we collected many specimens unavailable in the isles.

The famous Ooty Botanical Garden was full of bushy lichens, hanging from tree branches or scattered on the ground. We collected these generously. Similarly, the well-known Sims Park in Coonoor was a treasure trove of specimens. We spent hours exploring these gardens and scouring the ground. These valuable specimens with their reproductive structures were carefully packed in bottles or carry bags and quickly preserved upon reaching our destination.

To effectively teach students about rust fungus, which causes disease in wheat, we need wheat specimens infected with rust. However, when the department's supply of these infected specimens is depleted, one has to wait until fresh specimens are procured. Sometimes, the process takes years! To overcome this issue, I brought the leaves of the Justicia plant from Assam. This plant is also susceptible to rust fungus and produces beautiful spores. It is commonly grown as a fencing material in villages of Assam.

Last year, we visited the biodiversity-rich Western Ghats (Coorg) for our specimen collection trip. Collecting specimens in Coorg was far more challenging than in any other place I had visited. While collecting specimens, we were caught off guard by a silent attack from an army of leeches! It took us some time to realize

the gravity of the situation. Everyone ran for shelter! There were leeches inside our shoes, on our hair and even onto our cheeks. It felt as if they were falling from the sky!

Despite the chaos, my determination to collect specimens was not shaken. With utmost care and using some old tricks that my father had shared with me for dealing with leeches, we successfully collected Lycopodium with beautiful strobili. It was indeed a leech-laden day!

The next day, when I asked one of my students about his experience collecting specimens in such leech-infested spots, he smiled and replied "Sir, where do we have to collect today?" I felt content, knowing that I had inspired my students to embrace the art of specimen collection with the same enthusiasm and dedication!

At the same time, I hope that my collection spree doesn't raise the eyebrows of conservationists, or conflict with the principles outlined by B.A. Minteer et al. in their seminal work 'Avoiding (re)extinction'. A judicious collection of biological specimens is the most prudent way to live harmoniously with nature. Specimen collection will remain an important tool for learning and research. For me, it also brings joy, because every preserved specimen tells a beautiful story!

BY DR DIPON SHARMAH

WALKING AMIDST THE COFFEE GARDEN

Coffee is a beloved beverage throughout the world. Some enjoy it as black coffee, others prefer it with milk. For many, it's not just a beverage but a way of life. This aromatic drink is made from the roasted beans of a tropical plant and has a rich cultural significance.

South India has long been the epicentre of coffee culture in India. Coorg, nestled in Karnataka, is one of the top coffee-producing regions in the country. Known as the 'Coffee Land of India', Coorg is renowned for its lush green landscapes, hilly slopes and extensive coffee plantations. Because of its natural beauty, Coorg is nicknamed the 'Scotland of India'.

In November 2024, the Department of Botany, JNRM organized a three-day educational tour to Coorg for its M.Sc. final-year students. I was excited to be part of the group of 11 students, accompanied by our HOD and a lady staff member. We reached Coorg, also known as Madikeri, on 18th of November.

We travelled to Coorg from Mysore by road. As we climbed the hilly terrain, I saw the change in vegetation. On the way, we stopped at Nisargadhama, a beautiful delta formed by the river Kaveri. We explored the area and felt the cool water of

the river. It was very refreshing. As we approached Coorg, the lush green forests and distant mountains started appearing. These are the biodiversity-rich forests of the Western Ghats, which we studied in our theory classes. Seeing these rich natural forests was a mesmerizing experience for me. The sight of coffee plantations on the steep slopes was equally breathtaking!

There is an interesting folklore story of how coffee was introduced in Coorg. In the 17th century, Sufi Saint Baba Budan smuggled seven coffee seeds from Yemen and planted them on the slopes of the Western Ghats. However, large-scale cultivation only began during British colonial rule in the 19th century. This transformed Coorg into one of the primary coffee-growing regions of India.

On 19th November, our group toured a coffee plantation named Mountain View Coffee Plantation. As we walked along the narrow lanes of the hilly slopes, I inhaled the fresh aroma of the coffee bushes. These bushes were neatly trimmed and maintained at a uniform height. This gave the landscape an even appearance. Little clusters of green and burgundy coffee cherries hung from the branches. The sight was stunning.

Our guide explained that two coffee varieties are grown in Coorg: Arabica and Robusta. Arabica is known for its smooth, aromatic flavour and has oval-shaped beans with lower caffeine content. It constitutes about 60–70% of the world's coffee production. Robusta, on the other hand, is strongly flavoured with a higher caffeine content and has smaller, rounded beans. It is ideal for espresso blends and traditional South Indian filter coffee.

I learned that coffee in India is grown under shades of tall trees like rosewood, wild fig and jackfruit. This practice imparts a unique aroma and flavour to coffee as well as supports biodiversity. Intercropping is also a common practice with spices like pepper grown alongside coffee plants. This is a sustainable agricultural practice and also boosts productivity.

The guide also explained to us about blending Robusta coffee with Chicory in an 80:20 ratio. Chicory imparts unique flavour and enhances the taste of the brew. This blend is called 'Kaapi', a South Indian filter coffee which is famous for its strong and bubbly froth.

During the visit, we learned about the

famous Civet Coffee, also known as Kopi Luwak. It is one of the world's most exotic and expensive coffees. It is extracted from coffee beans that have been digested and excreted by the Asian palm civet. Our HOD had the privilege of tasting it and described it as strong and intense in flavour!

The guide helped us understand the journey of coffee beans from farm to cup. We witnessed the various steps and enjoyed the final product: a hot cup of the brew. I also learned new terms like Monocot, Dicot and Green Coffee. Usually, most coffee berries contain two beans and are referred to as dicot beans. Monocot beans, which consist of a single bean per berry, are considered A-grade coffee due to their smoother texture. On the other hand, Green coffee beans are unroasted, rich in antioxidants and have many health benefits.

Before this visit, I was not a coffee enthusiast. However, our visit to the coffee plantations of Coorg has changed my perspective. As I learned the journey of coffee from bean to brew, my appreciation for this beverage has grown a lot. This experience of walking through the lush coffee plantations of Coorg will stay with me for a lifetime!

BY B LAXHMI

BEAUTY

“Outer beauty attracts, but inner beauty captivates.” – Kate Angell

Beauty is not just about having a pretty face. In this world, people often perceive beauty as being external or a matter of physical appearance.

Unfortunately, people don't realise that beauty is not just related to skin tone or physical looks, but inner beauty has nothing to do with these aspects. It's the personality that you carry that makes you look beautiful and makes others fond of you.

There are thousands of beauty products available in the market that solve many beauty-related problems. Nowadays, skin care clinics and beauty salons are gaining more popularity. The concept of looking beautiful has grown and people are ready to spend a lot of money to buy these products.

It is rightly said by Helen Keller, “The best and most beautiful things in the world cannot be seen or even touched – they must be felt with the heart.”

Human qualities like love, affection and kindness towards fellow human beings can only be felt by the heart. This is possible only through the inner beauty of the soul. The beauty that we see as physical looks is not permanent. With age, you will get wrinkles, and you may not look the same. Your physical beauty may fade, but your inner beauty, which is reflected in the way you treat others around you, will always be there for you no matter how old you become. A kind heart that cares for others helps others in difficult times and brings a smile to someone's face is what the world needs today.

Accept yourself as you are and embrace the way the Creator, the Almighty, has created you and you will never care about what others think and say about you. Real beauty lies in your good deeds. Real beauty lies in the smile you wear, the confidence and courage you exhibit and the positive attitude that you carry with you.

BY T MOULI

LOTUS FIBRE AND A GREENER FUTURE

Lotus is a symbol of purity, rebirth and strength. It is known for its beauty and cultural significance. Yes, we can proudly say that it is the National Flower of India. It is associated with purity, beauty, wealth and the promise of new beginnings.

Every part of the plant is utilized for different purposes. Flowers are used for decoration. Seeds are used in cuisine. Rhizomes are edible. The lotus stem is used in traditional medicine and lotus stem fibre is used to make luxury clothes. The lotus fibres, with their unique properties, are attracting the attention of all. Lotus fibre is also known as lotus silk.

The extraction of lotus fibre from the lotus stem is not new; it has ancient origins in South Asia. Today, lotus silk has become famous all over the world. Now, India has also entered the production of lotus silk. In India, lotus harvesting is done in Manipur. Bijayshanti Tongbram (born 1993) is an

Indian female entrepreneur from Thanga Tongbram village of Manipur and is also the only silk maker in India. She is a Botany Honours graduate and had a special plan to do with the flora of Manipur.

In 2018, she started to extract lotus fibre from the lotus stem. Every morning, she collects the lotus stem from Loktak Lake, the largest freshwater body in the North East region. She has also generated employment for women in her community. Her innovative approach has caught the attention of many. She has been awarded and certified by the Government of India as a changemaker of the North East region.

Lotus fibre possesses a luxurious feel, natural sheen and breathability, making it a unique and comfortable material. Lotus fibre is an emerging fibre in the world of textiles and fashion.

BY SARITA TOPPO



DISCOVERING LITTLE ANDAMAN

"Island vibe and friend ties, the perfect combination for an unforgettable trip!"

Little Andaman, the fourth largest island of the Andaman Islands, lies at the southern end of the archipelago. I had heard that it offers pristine beaches, exotic flora, waterfalls and a serene landscape.

I rang my friend, a local guy from Hutbay and asked him to guide us on the trip. He readily accepted my proposal. It was November when I decided to visit Little Andaman along with my crazy friends. It took eight hours to reach Little Andaman by ferry.

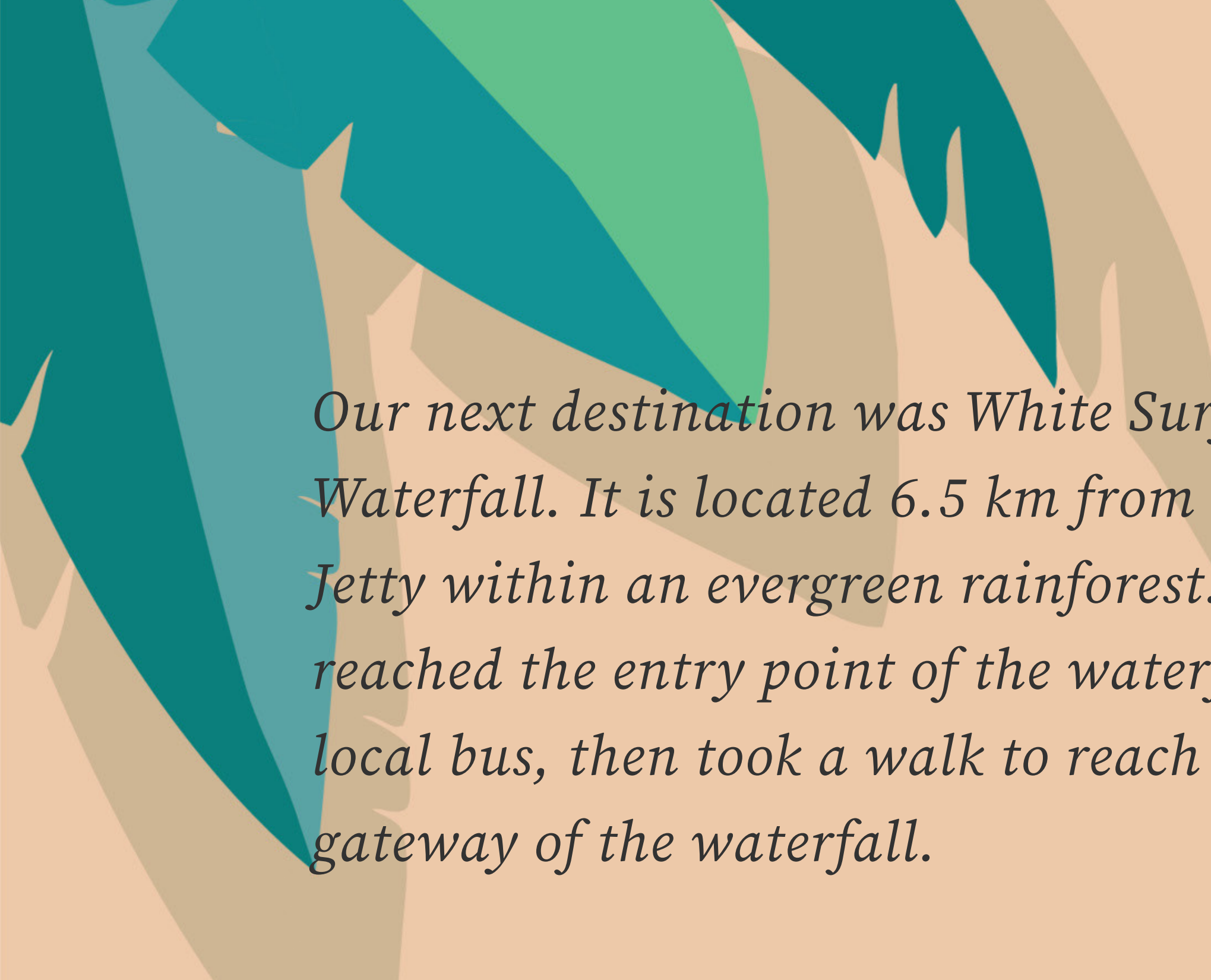
One surprising feature of Little Andaman was the name of the places. They are commonly referred to by the distance from the jetty. My friend had arranged a four-wheeler for a day as a mark of love for our friendship. He took us to Kalapathar beach. Black rocky limestone formations are dotted along the sandy beaches, making them different from other islands. We also visited Butler Bay Beach. This beach is one of the best surfing destinations in India. However, you will find warning boards about crocodiles all over Little Andaman.

That day, a crocodile was captured by the

Forest Department near a human settlement. The size of the crocodile was huge. Talking to the locals about the issue, they shared many instances of human-crocodile conflicts. They also stated that the population of crocodiles has increased significantly. Who is responsible for this situation? Project Crocodile, implemented in the 1970s for their legal protection, or the rise in the human population along with increasing settlement areas, agriculture, fishing activities and tourism infrastructure overlapping with crocodile habitats? This cannot be answered easily. If the conflict is to be minimized, a study needs to be conducted to review Project Crocodile in A & N Islands.

We rented two-wheelers and headed towards the lighthouse. It is located at the southernmost tip of the island and offers a panoramic view of the forest and beach. Driving through the dense forest and then onto the sandy beaches of the island made the journey adventurous and thrilling. Facing all odds, we reached the lighthouse and climbed it. The view was incredibly awesome. The sea breeze refreshed my face, and the sound of waves crashing onto the shore created a sense of happiness that connected me with nature.





Our next destination was White Surf Waterfall. It is located 6.5 km from Hutbay Jetty within an evergreen rainforest. We reached the entry point of the waterfall by local bus, then took a walk to reach the gateway of the waterfall.

As we walked through the narrow lane in the deep woods towards the waterfall, I felt an itching sensation on my leg, and my fear came true. It was a leech—oh lord!! My friends helped me get rid of the leech that had happily feasted on my blood. After donating some blood to a creepy creature, we reached the waterfall. It was literally nature's beauty in motion. We thoroughly enjoyed nature in its purest form.

My friend suggested a jungle trekking trip through a palm oil plantation, and as a Postgraduate in Botany, I was thrilled to see the plantation. It was drizzling, making it more exciting. The palm plantation spreads over 1,593 hectares. In 1977-79, Andaman & Nicobar Forest Plantation and Development Corporation was set up to promote monoculture plantations. In 2002, the Supreme Court ordered a halt to all monoculture plantations. To know the impact of this ban, I talked to the locals about employment opportunities in Little Andaman. The locals informed me that

earlier, the palm oil plantation was the major employment sector on the island. Now, after the ban, many people have lost their jobs. I also observed that most young people have migrated to Port Blair to seek employment. After reading some online articles, I understood the purpose of the ban on monoculture plantations by the Supreme Court, as they have a destructive impact on the environment, and our island being a fragile ecosystem, the impact could be devastating. But the question remains: What is the government plan for providing employment opportunities to the people of Little Andaman?

The tourism industry has the potential to employ the people of Little Andaman, but the island lacks proper tourism infrastructure. Irregular ships, a lack of good hotels, and inaccessibility to some important tourist spots like the lighthouse throughout the year due to a lack of roads add to the challenges. If all these issues are addressed, Little Andaman has the potential to become one of the most popular tourist destinations in the Andaman & Nicobar Islands.

"It is not the destination where you end up but the mishaps and memories you create along the way."
With all the good memories, we landed back in Port Blair.

BY VIVEK KUMAR SINGH

LATEST IN THE NEWS

RNAi Therapeutics

A new way to treat diseases genetically has arrived. It is known by the name RNA interference (RNAi) therapeutics. These medicines work in a very interesting way. They "silence" the harmful genes before they can produce disease-causing proteins. The traditional medicines that we take work by treating symptoms. But RNAi stops diseases at their root. This can make treatment effective.

The first RNAi drug was approved

in 2018 by the US Food and Drug Administration. These medicines also last longer than regular drugs. One injection can work for months. Scientists believe RNAi could help treat many diseases. Genetic disorders, heart disease and even Alzheimer's can be treated. There are gene-editing methods like CRISPR. But RNAi does not change DNA permanently. So this technique is much safer.

Climate-Resilient Crops

An international team of researchers warns that without rapid changes to how we develop climate-resilient crops, we could face widespread food shortages.

A study published in Trends in Plant Science says that without quick action to develop crops that can survive extreme weather, we may face food shortages, famine and global instability.

"We're in a race against time," said Silvia Restrepo, a co-author of the study. Crops are struggling with heatwaves, droughts, floods, pests, and diseases. Even when plants survive, their nutritional value drops.

The researchers stress the need for urgent action and global cooperation to ensure food security for all.

A Race Against Extinction

In a recent release dated 19th December, 2024, scientists from the Royal Botanic Gardens, Kew, and their partners have described 172 new species of plants and fungi in 2024. Some of these have potential medicinal applications.

These include unique finds like a marzipan-scented vine, a ghostly palm from Borneo and a plant family that doesn't photosynthesize but relies on fungi for food.

But the sad news is that many of these species are already at risk of extinction due to habitat destruction, like a Vietnamese vine threatened by cement production.

Kew scientists warn that 3 out of 4 unknown plants may be endangered. And that over 2 million fungi species remain to be discovered and many could vanish before being known!

New Ramsar Sites

On 2nd February, World Wetlands Day was celebrated. Ahead of these celebration, India designated four wetlands as Ramsar sites. With these additions, now there are 89 Ramsar Sites in India.

The newly designated Ramsar sites are Sakkarakottai Bird Sanctuary and Therthangal Bird Sanctuary in Tamil Nadu, Khecheopalri

Wetland in Sikkim and Udhwa Lake in Jharkhand. For Sikkim and Jharkhand, this marks a significant milestone. Because they have secured their first ever Ramsar sites!

Khecheopalri Wetland in Sikkim is sacred to both Buddhists and Hindus. This wetland is revered as a wish-fulfilling lake.

Animal Cell and Photosynthesis

During evolution, more than a billion years ago, a cell swallowed another tiny cell - a blue-green alga (Cyanobacteria). The two cells did not fight with each other. Rather, they co-existed friendly. Now, scientists have tried to recreate this event in the lab by inserting an algal cell into an animal cell!

In a recent study published in Proceedings of the Japan Academy, Series B (Aoki et al., 2024), researchers placed chloroplasts—plant organelles responsible for photosynthesis—inside hamster cells. These chloroplasts converted light into energy. They stayed active for two days inside the hamster. This experiment was inspired by an interesting feature of sea slugs. They steal

chloroplasts from algae to produce energy!

Earlier attempts failed because, for the animal cells, the chloroplasts were foreign entities. However, this time, scientists used hardy chloroplasts. They obtained these from Red alga that survive in volcanic hot springs. Scientists tricked the hamster cells into absorbing them naturally.

Although the experiment worked for only two days, scientists are now planning to add necessary genes so that chloroplasts survive longer. If this is materialized, a living animal that absorbs carbon dioxide and produces oxygen will not be a distant dream!

Detecting Life on Mars

Microbes can help us unlock the mysteries of extraterrestrial life. Scientists are exploring a new way to find life on Mars. They are doing this by observing how tiny microbes move.

Microbes exist everywhere on Earth. Some are found in extreme places like icy lakes and deep oceans. Since they survive harsh conditions, scientists believe similar organisms might exist on Mars or Jupiter's moon Europa.

Earlier researchers looked for chemical traces of life. Now this is changing! They are now testing a simpler method—watching microbes swim. A

*German research team studied three microbes: *Bacillus subtilis*, *Pseudoalteromonas haloplanktis*, and *Haloferax volcanii*. They placed these microbes near a nutrient-rich solution and observed them moving toward it. This movement is called “chemotaxis.” This could help detect life in space.*

*This technique was published in *Frontiers in Astronomy and Space Sciences* (February 6, 2024). It is cheaper and easier. This makes it suitable for future space missions. If microbes on Mars show similar movement, it could be a strong sign of extraterrestrial life.*

My Visit to IISc

When I first heard that we had received permission to visit the prestigious Indian Institute of Science (IISc), Bangalore my excitement knew no bounds. Our educational tour, consisting of eleven M.Sc. Botany students, was accompanied by Dr. Dipon Sharmah, HOD Botany, JNRM, and a lady staff member. We reached Bangalore on 13th November, 2024.

The very next day, i.e., 14th November, was filled with excitement. It was our day to visit IISc. The institute, called 'Tata Institute' by the locals, is regarded as a premier research and education centre for science and engineering in the country. After a sumptuous breakfast at the iconic Mavalli Tiffins Room (MTR) in Gandhinagar, we began our journey to IISc by boarding a bus from the Majestic. The bus ride was comfortable. I was awestruck to see hundreds of government-run buses at Majestic, the main bus stand of Bangalore. Public transport is very well organized in Bangalore. It took about 30 minutes to reach IISc from the Majestic.

We reached IISc well before our scheduled visit time of 11.30 AM. We had ample time on our hands. Therefore, after finishing all the formalities and obtaining the token passes at the entry gate, we started to explore the sprawling campus.

The IISc campus is vast, spanning about 400

acres. The roads are wide and are shaded by lush green canopies. Sunrays rarely found their way onto the walking path. It was very soothing. I noticed that students, research scholars and teachers were all riding bicycles inside the campus. It was a new sight for me. I had never experienced such peace and calmness before in my life. I am at a loss for words to describe the academic charm and brilliance of the campus.

The IISc campus is a beautiful blend of historic buildings and modern facilities. During our walk on the campus, we passed by the JRD Tata Memorial Library, followed by several other iconic buildings. On our way to the Department of Microbiology and Cell Biology (MCB), which had granted us the time slot from 11.30 AM, our HOD shared his experience of a month-long training on 'Recombinant DNA Technology' he had attended at IISc in 2010. He told us how researchers would cycle back to their respective laboratories after dinner and work until 1-2 AM. Walking those same paths, knowing that some eminent people like Sir CV Raman, Homi Bhabha, Vikram Sarabhai, Anna Mani, Satish Dhawan, and CNR Rao, to name just a few, were once part of IISc, I felt a deep sense of pride and inspiration.

We reached the Department of Microbiology and Cell Biology (MCB) by 11 AM and waited in the reception area. At exactly 11.25 AM, we were warmly welcomed by Dr. William Surin, Principal Research Scientist at MCB. He took us

around the Central Instrumentation Facility of the Department and showed us many advanced instruments like the NMR machine, gas chromatography, ultracentrifuge, sonicators, spectrophotometers, etc. We also got to know the working principles and applications of these instruments. Dr. Surin also explained flow cytometry, an analyzer used to study neutrophils and macrophages. We had read about these instruments in theory only. Seeing these instruments for the first time was an enriching experience for all of us.

We visited various research laboratories of the faculty members. I was fortunate to know the different ongoing experiments and projects undertaken by the research students. The enthusiasm of the researchers and the advanced equipment they were working with left a lasting impression on me.

One of the highlights of our visit to IISc was the opportunity to interact with faculty members and the Chair of the MCB Department. We were taken to the conference hall, where we met Prof Saumitra Das, Chair of the MCB Department and Prof. Utpal Nath. The Chair and the faculty members of the department were not only very knowledgeable but also very easily approachable. They shared their insights and experiences. The Chair explained the collaborative work of IISc's various biological science departments. He spoke about research on microbes that cause diseases like hepatitis, cancer, etc. He also

spoke about how viruses and bacteria cause diseases in crop plants and methods to prevent this. Prof. Utpal Nath, an expert in plant biology, shared his ongoing research on the genetics of *Arabidopsis thaliana*. The entire session was very interactive. We ended it with a memorable group photograph.

After this interactive session, we visited the research lab of Prof Utpal Nath, primarily focused on experiments with model plants. In that section, one research project was going on the plant *Arabidopsis thaliana*. Ms Druppall, a research scholar, explained her research on gene manipulation and its impact on the plant's development.

During the visit, we also learned about various scholarships and fellowships offered by IISc. There is a rigorous selection process and only the top 5 % of students who have cleared the CSIR-NET / GATE and similar exams are selected for admission into the Ph.D. programs after interviews. We concluded our visit with a delicious lunch at the IISc restaurant named Nesara.

Overall, my visit to IISc Bengaluru was an inspiring and enriching experience. As I left the campus, I carried with me not just memories of the day but also renewed motivation for my further academic studies. I extend my heartfelt gratitude to the Botany Department, JNRM, and more particularly, Dr Dipon Sharmah, HOD Botany, whose efforts made this opportunity possible. This experience has encouraged me to aim higher in my life.
[Courtesy: The Andamnan Sheekha]

BY SMRITI MISHRA

A BOTANICAL EXPLORATION OF LALBAGH GARDEN

Although Bangalore is called the Silicon Valley of India, it is still nicknamed the 'Garden City'. One of the must-visit gardens in Bangalore for any nature lover is the Lalbagh Botanical Garden. So, when our group of 11 M.Sc. Botany final-year students from Jawaharlal Nehru Rajkeeya Mahavidyalaya along with our HOD arrived in Bangalore for an educational tour, visiting this garden was on our top list.

On 15th November, we visited the Lalbagh Botanical Garden. I was very excited because of my immense love for plants and flowers. We bought the entry tickets and were advised not to carry plastic inside the garden, as it is a plastic-free zone.

Spread over an area of 240 acres, the garden has a huge collection of tropical and sub-tropical plants. Several centuries-old trees are found in the garden. It has 1854 plant species, some of which are exotic varieties. As a botany student, I could not think of a better place to learn about plants while being in Bangalore.

At the entrance, we saw the map of the garden. All my friends were determined to explore every nook and corner. As we walked along the paths, I noticed some endangered and native tree species, such as the Mysore

*fig (*Ficus drupacea*) and the small-fruited voacanga (*Voacanga africana*), which is native to Africa. The voacanga tree produces small, rounded fruits that are eaten by parrots and squirrels. A little further ahead, we came across a massive tree with parrots. Their chirping filled the air with life.*

It was morning and a large number of people were seen jogging, walking and practising yoga asanas on the beautiful lawns of the garden. This highlights the immense importance of gardens in maintaining the health of city dwellers. A signboard warned us of the presence of snakes in the bushes. So, we all kept a safe distance from the bushes.

*The garden has a rich history. It was initiated by Hyder Ali and later completed by Tipu Sultan, who imported many plants from various countries. One plant that caught my attention was the Pride of Bolivia (*Tipuana tipu*), which is possibly named after Tipu Sultan. A very tall tree, called the Tower Tree or Reach for the Sky Tree (*Schizolobium parahyba*), stood prominently. It is one of the fastest-growing trees. Native to Australia and New Guinea, the Umbrella Tree (*Heptapleurum actinophyllum*), grows with multiple trunks and its leaves form an umbrella-shaped rosette, which gives the tree its common name. These trees captivated my imagination.*

As we moved forward, we reached the famous glasshouse. The beautiful glass atrium was built in 1889. It was modelled after the Crystal Palace in Hyde Park, London. It hosts one of the largest flower shows in the country during Republic Day and Independence Day. A daily footfall of more than 50,000 visitors is seen during the event! Although the flower show was not happening during our visit, I clicked a few pictures of myself with the glasshouse in the background. I hope to attend the flower show at least once in my lifetime!

I noticed that the garden is home to numerous wild species of birds as well as other wildlife. I also saw intricate carvings on the trunks of century-old trees. The statues are preserved as antique pieces. The designs on the trunks were very beautiful. I silently admired the patience and skill of the artists who created them.

Another highlight of the garden is one of the oldest known rocks on Earth. It is estimated to be 3000 million years old! As I stood on this ancient rock and mathematically calculated the years in crores, as we are accustomed to, it made me feel special. I was standing on a piece of history that had witnessed the Earth's evolution and was formed long before the arrival of humans - we, the Homo sapiens! I climbed the slightly slippery rock and reached the top. The view from there was

breathhtaking. I clicked a few pictures and started descending as it began to drizzle.

After walking for about two hours, we were tired. Our teacher bought guavas from a shop in the garden. After eating and resting for a while, we visited the tree fossil collection. It was brought from the National Fossil Park in Tamil Nadu. The petrified coniferous fossil tree is estimated to be 20 million years old!

Next, we saw the big statue of Chamaraja Wodeyar, the 23rd Maharaja of Mysore. The surrounding area of the statue was well-maintained with beautiful vegetation. Nearby, the rose garden with its blooms and fragrance captured my heart. We also wanted to visit the bonsai garden and the Japanese garden, but both were closed. We explored the topiary garden, where plants were trimmed into creative shapes. We took a group photograph here and kept ourselves hydrated at the same time.

*Before leaving the garden, I saw a big silk cotton tree near the west gate. This 200-year-old giant tree, with its huge trunk and bright orange flowers, was eye-catching. The whole garden was very clean and beautiful. I loved the tall trees, flower-lined paths and open lawn areas. My visit to Lalbagh was a wonderful experience!
[Courtesy: The Echo of India]*

BY SONALI KANDAR

Love can be heard too...

Those raindrops dance through the lofty clouds.
Tracing paths of liquid diamonds in the boundless sky ,
to awaken the sleeping seeds, painting lush greenery to a barren
land.
When she kisses, a gentle splash, composing a Love Song upon the
Earth and eager skin.
Did you ever hear?

Before the sun could paint stories on your face with gentle light
Are there any melodies that kindles you from sleeps embrace.
Morning entrance, stretching into soft sighs.
The rooster crows a loving call
to awaken hearts to a fresh day ahead.
Did you ever hear?

Have you ever sat alone enveloped in natures embrace?
As if under spell of its captivating allure.
Birds chirping, green grass swaying in the wind.
The cool breeze caresses weaving through your hair with a gentle
touch.
When whispers of the wind embrace the air, it beckons, calling you
with a gentle flair.
Did you ever hear?

How do you capture the essence of love in your words?
Some say it's felt while others have spoken its depth.
Some sacrifice all for love it's sake while others take from the
hearts they break.
Where does love reside? Is it confined to human heart and animal
souls?
Nature seeks to convey it's love too through a spectrum of sounds
Did you ever hear?

BY SNEHA

मानव तू पछताएगा।

तनकि तुझमें भी मोह नहीं,
कहीं तुझमें संतोष नहीं।
तू जतिना अधिक को पाता है,
उतना ही लार टपकाता है।

तेरी लालच के कारण,
हर वृक्ष उजाड़ा जाता है।
हर डाल-डाल, हर पात-पात,
अपनी मृत्यु का शोक मनाता है।

क्या अपनी इच्छा पूरी करने को,
तूफानों से भड़ि जाता है?
क्या इच्छा पूरी करने को,
सूरज से आँख मलाता है?

कोशिश कर ले लाख परंतु,
ऐसा ना कर पाएगा।
झलकेगी कायरता तेरी,
मानव, तू पछताएगा।

क्यारी के पौधों पर रंगी,
हलि-डुलकर मुस्काते हैं।
मोह, प्यार और ईर्ष्या वश,
लाखों बार उजाड़े जाते हैं।

इस संयोग से ऐसा वयिोग,
किया तूने खड़ा।
माँ से अलग हुआ जो फूल,
कभी नहीं हो सका बड़ा।

क्या अपनी बातों से दूजे के,
जीवन में कुसुम खलाया है?
अपनी बातों से क्या दूजे का
भी,
मन हर्षाया है?

काँटे चारों ओर छींटा,
तू क्या कुसुम खलाएगा?
झलक रही है ईर्ष्या तेरी,
मानव, तू पछताएगा।

एक आम का पेड़ लगा था,
अपने फल को देने को।
पीपल का वह पेड़ खड़ा था,
शुद्ध वायु देने को।

बरगद का वह पेड़,
कई सालों तक डटकर खड़ा
रहा।
छाँव, फल और नीर दिया,
कुछ भी तुझसे ना माँग रहा।

तेरी बुद्धिके आगे,
वर्षों की बुद्धिभी हारी।
ताकत अपनी दखिलाने को,
उस पर चार कुल्हाड़ियाँ दे
मारी।

क्या अपने हाथों से बबूल का,
पेड़ गरि भी पाएगा?

ना पीने को जल मलि पाता
है,
ना खाने को अनाज कहीं।
सर पर छत ना आगे-पीछे,
रोने को औलाद कहीं।

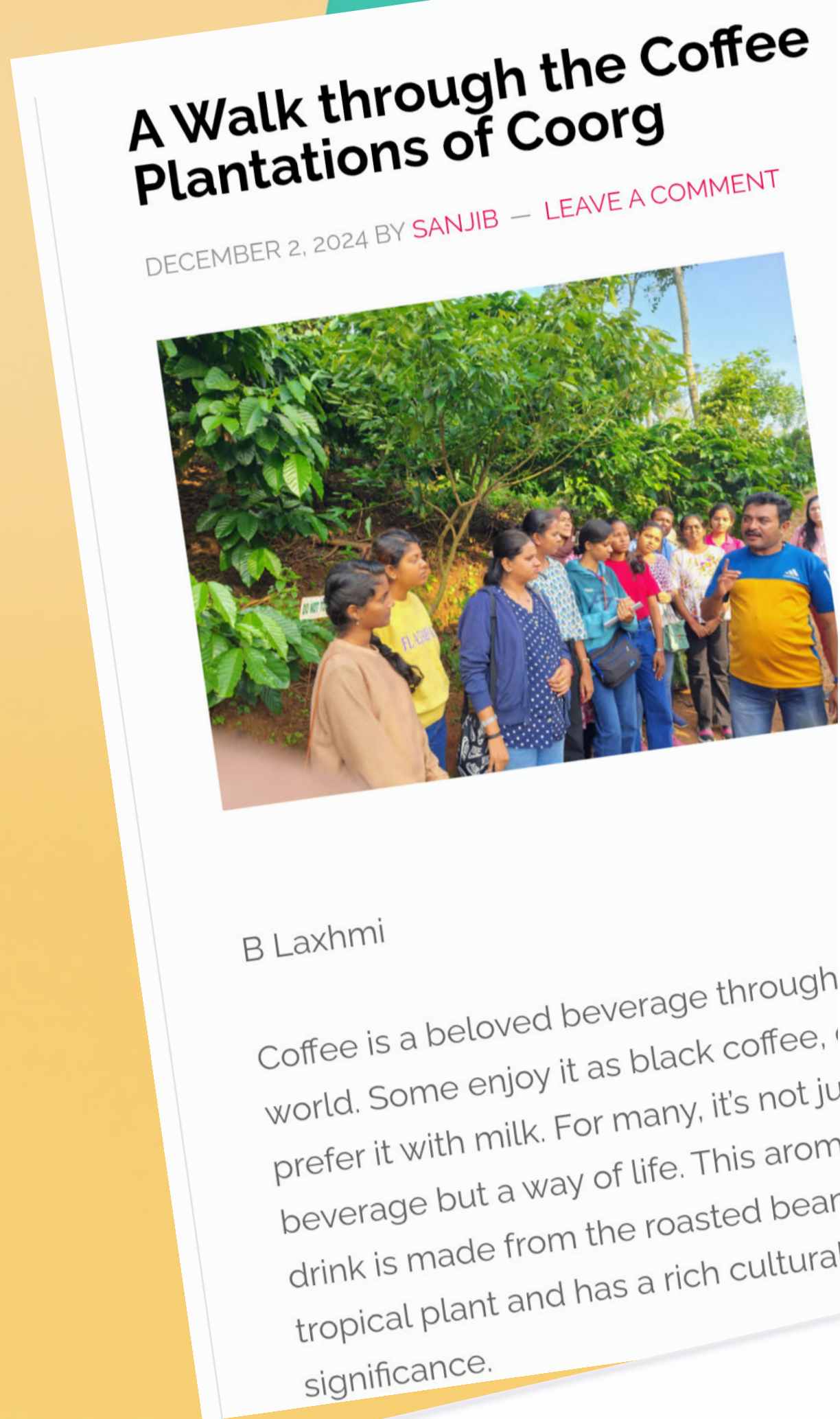
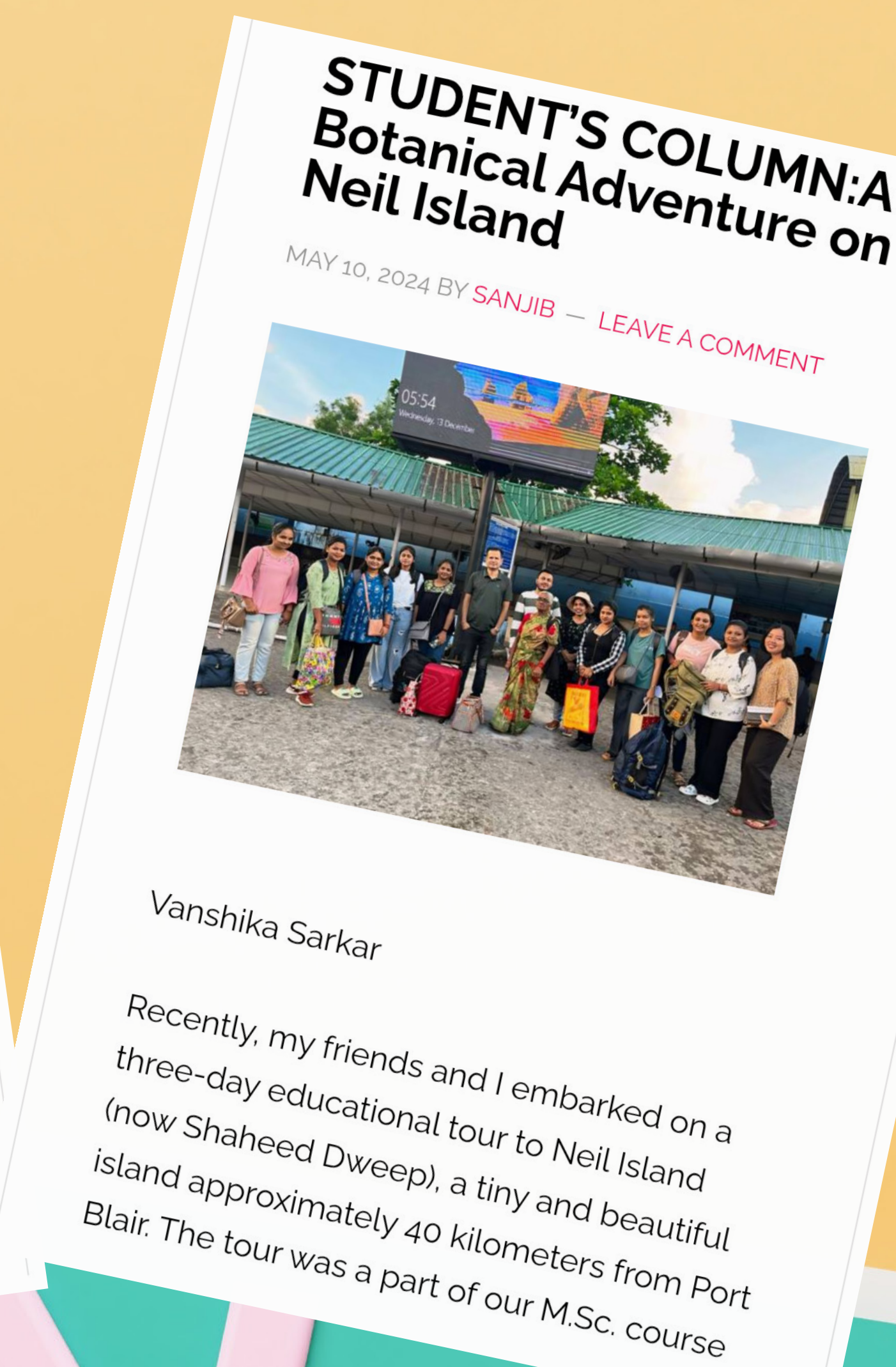
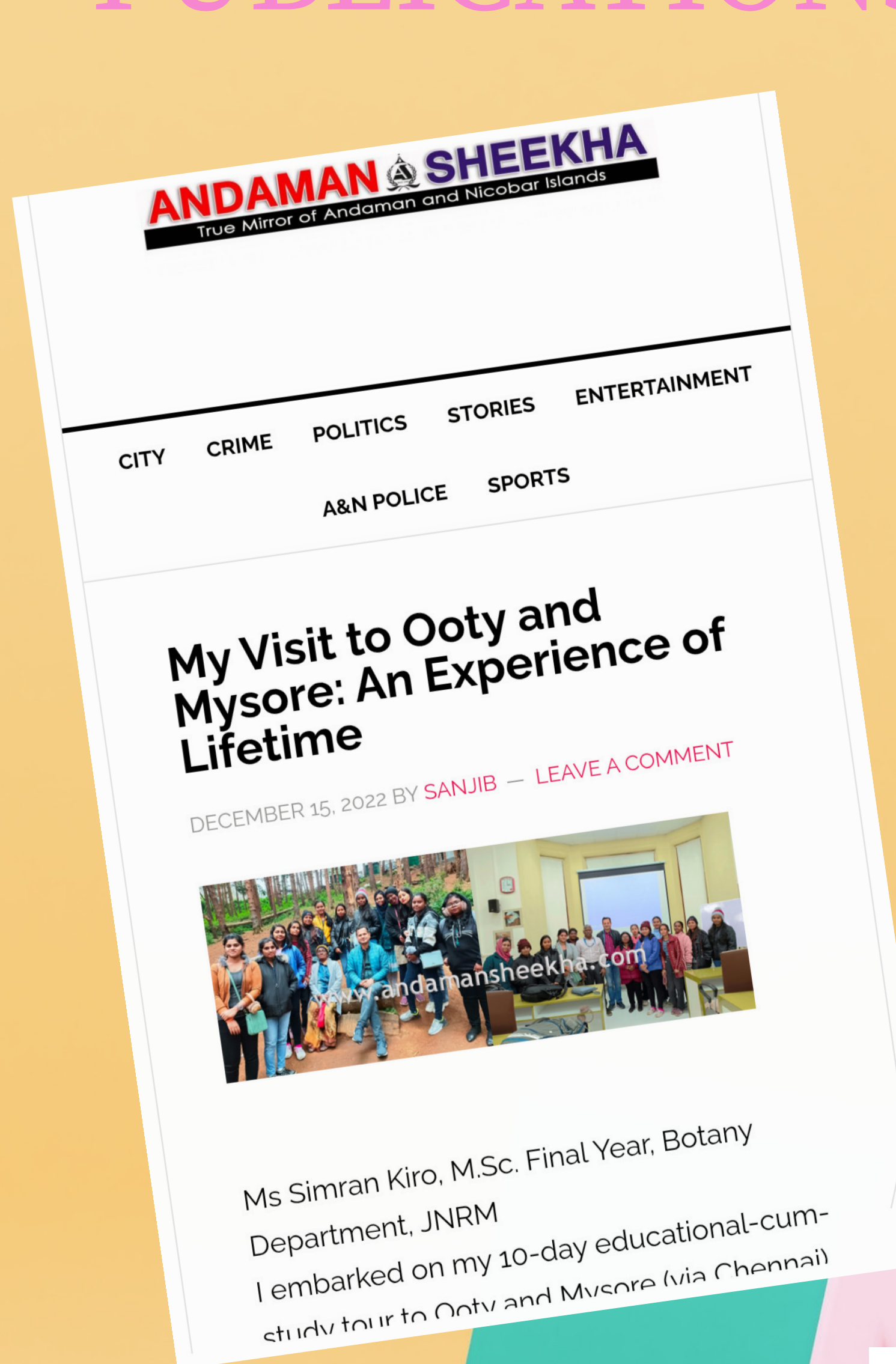
स्थितिबिड़ी गंभीर परंतु,
मानव खूब हर्ष मना रहा।
इन पंक्तियों को पढ़ने पर भी,
अपनी मुस्कान छुपा रहा।

क्या तू अपनी ताकत से,
अंबर से जल बरसा पाएगा?
क्या अपने बल से धरती पर,
नया वर्ष ला पाएगा?

सर नीचे कर सुनता रह,
कोई काम नहीं दखिला रहा।
धरती की हानिका,
पश्चाताप नहीं कर पा रहा।

BY SUBHAM DUBEY

PUBLICATIONS BY STUDENTS IN NEWSPAPERS



Important Events & Personalities



Two-days national conference on “Innovative Ideas in the Fields of Science, Technology, Social Sciences and Humanities” in collaboration with the Society of Science, Technology and Humanity, Kalyan, Maharashtra on 23-24th Nov, 2023.

National conference on ‘Innovative Ideas in the Fields of Science, Technology, Social Sciences and Humanities’ at JNRM



PORT BLAIR, NOV 24/--/ The Botany Department, JNRM organised a national conference on 'Innovative Ideas in the Fields of Science, Technology, Social Sciences and Humanities' in collaboration with the Society of Science, Technology and Humanity, Kalyan, Maharashtra on 23rd November 2023.

Around 34 delegates from different regions of mainland India actively participated in the conference. In the inaugural session, the chief guest Dr. Chandrakant Mandlik, Principal, Mahatma Phule Nutan Mahavidyalaya mentioned that students are the pearls of the country and they can reform the future of the country as creators, innovators and scholars. The guest of honour Pearl Devdas, Principal JNRM and chief patron of the national conference highlighted the importance of the cultural and scientific collaboration and emphasised upon innovation which can lead to betterment of humanity. The keynote speaker Dr. Lalji Singh, Addl Director and Regional Head of the Botany department. About 300 students from Botany, Zoology, Chemistry and Geography departments attended the inaugural programme.

The inaugural session was followed by Plenary Session I and II. Dr. Meera Srivastava, Retd Principal, Govt College, Lunakarsar addressed the concern of electromagnetic radiation on insects. Dr. Sandesh Wagh, Professor and Head, Department of History, University of Mumbai presented a talk on human rights and the Indian constitution. Dr. Vasant P Mali, Principal, J.W.S.G. College, Maharashtra gave a talk on wood rot fungi. This was followed by parallel technical sessions I and II in which 25 papers were presented. Papers were presented by Dr. G. M. Dharne, Professor, Department of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Dr. Santosh Kulkarni, Associate Professor, K. M. Agrawal College, Kalyan, Dr. Munish Pandey, Associate Professor, Department of Physics, K. M. Agrawal College of Auto



The renowned water conservationist Shri Rajendra Singh, also known as 'Waterman of India' and the winner of Ramon Magsaysay award and Stockholm Water Prize, an award also known as the 'Nobel Prize for water' was the chief guest of the inaugural programme of three day national conference from 1-3rd Feb, 2017



A three day national conference on the topic 'Climate Change, Biodiversity and Bioresource Management' jointly organized by PG Dept of Botany, JNRM, Microbiologist Society, India, and Shree Halari Visa Oswal Degree College Affiliated to University of Mumbai from 1-3rd

STUDENTS ACTIVITIES



A 7-day training program on Plant Taxonomy was organized from 15 - 21 October 2024 at the Botanical Survey of India (BSI). The program is attended by M.Sc. Botany I & III Sem students.



A ten-day educational tour for M.Sc. Botany final year students was organized from 13-21 Nov 2024. The group visited academic institutions of excellence and biogeographical sites in Bangalore, Mysore & Coorg.



M.Sc. Botany students visited the prestigious Indian Institute of Science (IISc), Bangalore on 14th Nov, 2024. Students visited the Department of Microbiology & Cell Biology (MCB) and interacted with faculty members and researchers.



M.Sc. final year students visited the Department of Studies in Botany, University of Mysore on 20th Nov, 2024. They visited the Medicinal garden, Herbarium and Specimen Section of the department.



Botany Department won the 2nd Position along with cash prize in the CULTURAL DANCE COMPETITION organised by the Red Ribbon Club on 21st Nov, 2024

STUDENTS ACTIVITIES



Ms P. Anthra, student of M.Sc. Botany, JNRM attended Rajya Sabha Internship Programme at Rajya Sabha Secretariat, New Delhi from 28 Nov to 8th Dec 2023

JNRM students to attend Rajya Sabha Internship prog



PORT BLAIR, NOV 27/--/ The Rajya Sabha is set to host its prestigious two-week internship program starting from November 28, 2023. Among the selected students three are from JNRM - T. Nikil of M.Com., M. Raja Kumar of M.A. Political Science and P. Anthra of M.Sc. Botany. Pearl Devdas, Principal JNRM congratulated the selected students and extended her best wishes for the successful completion of the reputed internship program. The Rajya Sabha internship program is a platform for students to gain valuable insights into parliamentary proceedings and public policy.

Annual Botanical Forum festival 'floristic' organized in JNRM

Port Blair, Jan. 10
A two-days annual Botanical Forum Festival 'Floristic' was organized on Jan 8th & 9th by Post Graduate Department of Botany, JNRM. On Jan 8, a number of competitive events like photography, rhythmic botany, microbiome food festival, pottery painting, nomenclature etc. were held which attracted participants from different departments of JNRM and ANCOL. On the occasion, the wall magazine 'Daffodil' was inaugurated by the chief guest Dr. N. Francis Xavier, Principal, JNRM. During the lecture sessions held on Jan 9, a glimpse of evolution and extinction of dinosaurs through animation film and photographs of the fossils of the giant extinct animals taken during a visit to the American Museum of Natural History, USA were shown. The keynote speaker Dr. Pavan Jutur from International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi gave a detailed presentation on recent advances in biofuel production from marine algae. Dr. Asha AN, Bio-Care scientist at ICGEB, New Delhi and an alumnus of Botany department JNRM, provided information about different research opportunities in life sciences. Dr. S. Jayakumar, Principal, ANCOL also spoke on the occasion. Prizes and certificates were also distributed to the winners of different competitive events, a communication said.

Power break in city area

Port Blair, Jan. 10
The power supply will remain suspended at few areas on Jan 11, 2020 from 7 am to 11 am in connection with urgent maintenance of 11 KV switchgear at Phoenix Bay Power House. The areas to be affected are Marine Hill, Dugnabad complete, Round Basti & Netaji Club area. In addition to above, the power supply may also get interrupted at Shristy Nagar, Atlanta Point, Cellular Jail, G.B. Pant Hospital, Police HQ, Marina Park & Aberdeen Bazaar site office area, Vidhyut Bhawan, Electricity HQ Office, PBMC Auditorium, APWD CE Office, Secretariat, Court Complex, PAO, Raj Niwas & Gandhi Park, STS Workshop, BSNL Bhawan, Model School area, Fire Brigade, ANIIDCO Bhawan area, Girls School, CCSAberdeen Bazaar area, Supply Line complete, Netaji Stadium area, Electricity Bazaar site office, Jama Masjid, Netaji Club and part of Gurudwara Lane, Part of Junglighat, Vijay Baugh, Dairy Farm complete, a communication said.

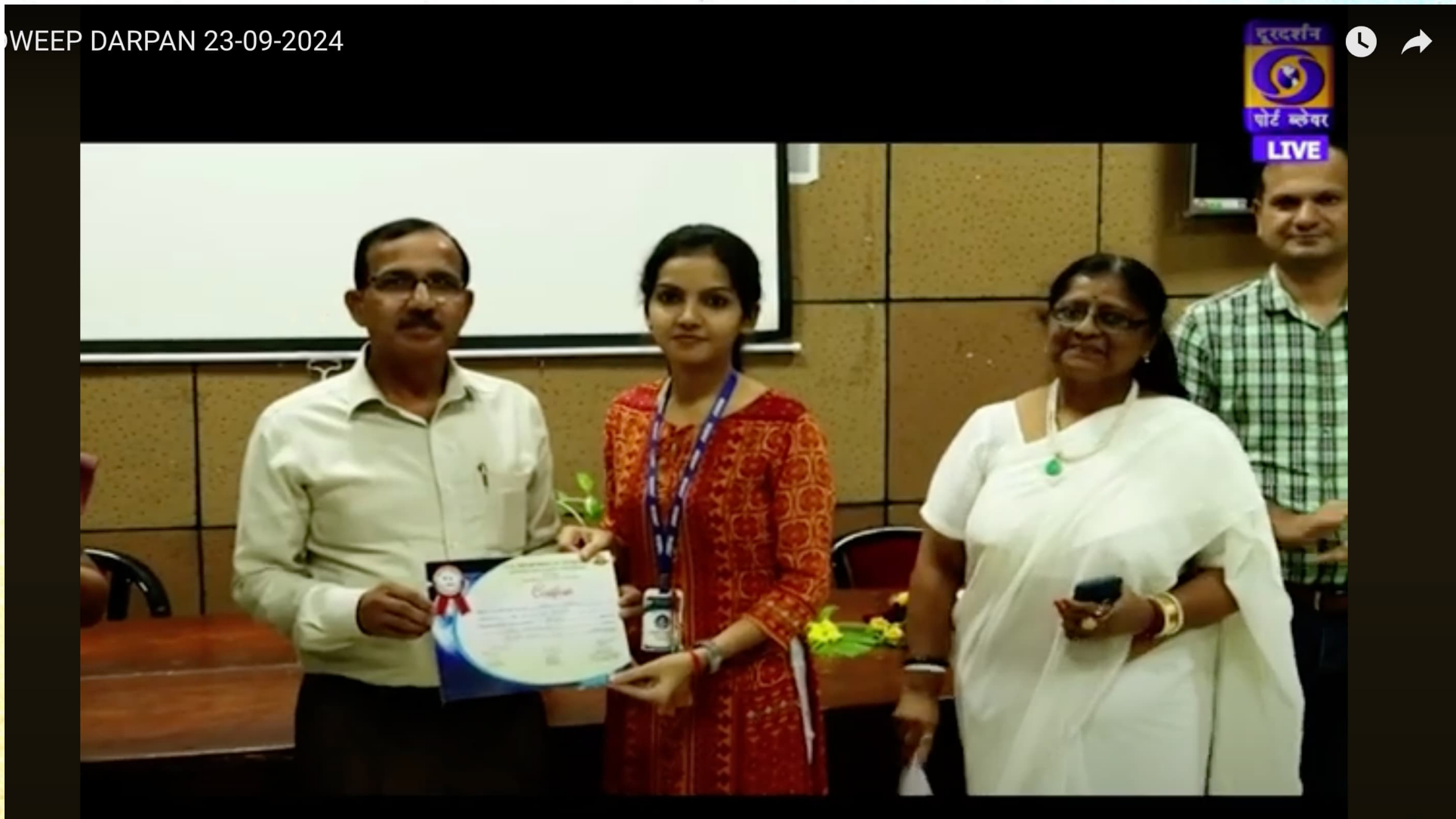
Citizens urged to....



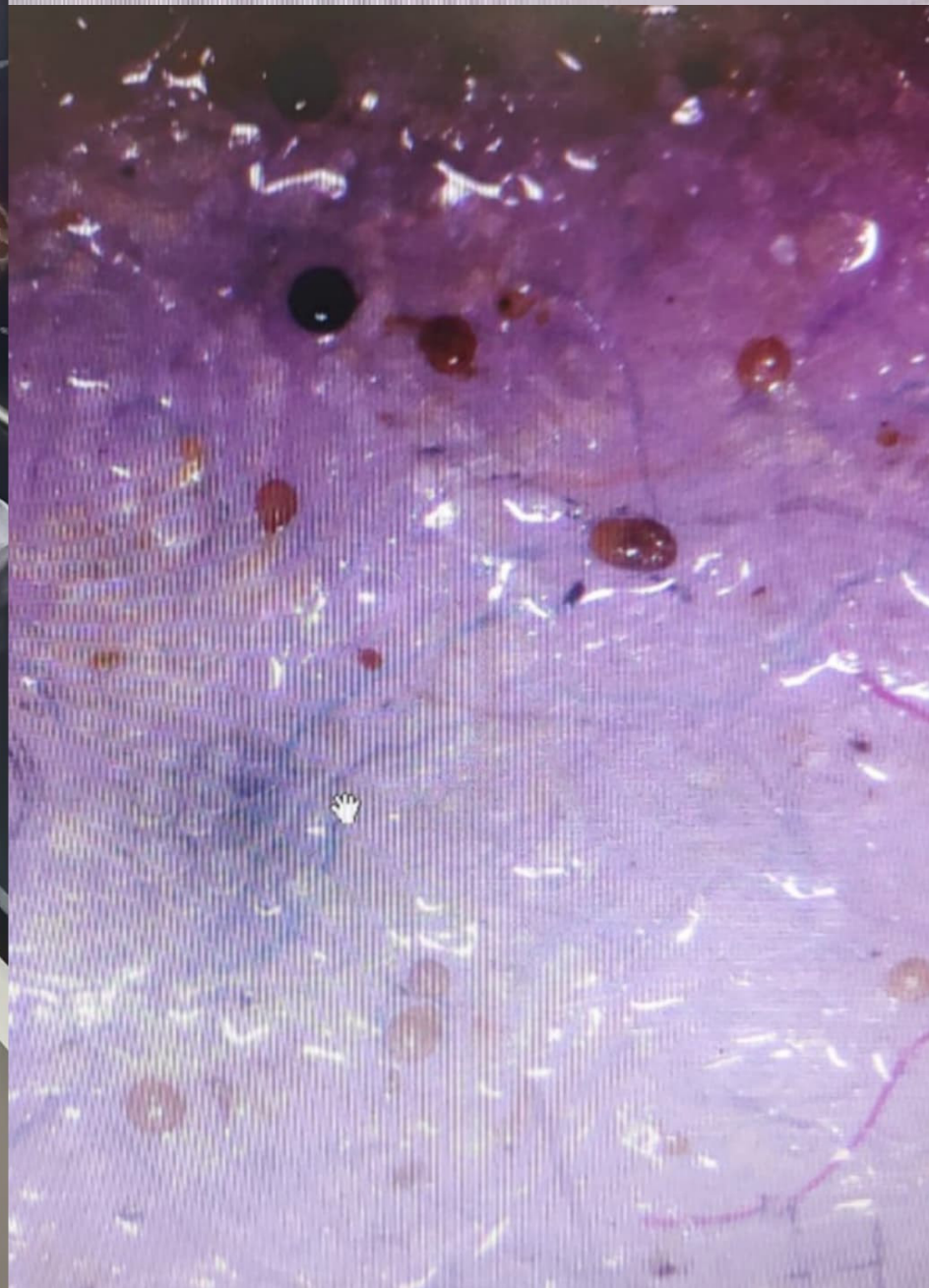
Sonali Kandar & B Laxhmi of M.Sc. Botany participated in a group discussion on 'Protected areas of A & N Islands at Biological Park, Chidiyatapu.



As part of the Skill Enhancement Course the B.Sc. First Year students showcased their creativity by preparing beautiful floral arrangements.



Smriti Mishra of M.Sc. Botany III Sem secured First Position in the Hindi poem recitation competition organized by the Dept of



Training on Plant Taxonomy for PG Botany students organized by BSI

Sri Vijaya Puram, Oct. 17

The Botanical Survey of India, A&N Regional Centre initiated a seven days training/workshop programme on Plant Taxonomy (Identification, Nomenclature and Herbarium Technique) for M.Sc. (Botany) students to impart technical skills on floristic study and conservation techniques on various groups of plants on Oct.15.

Shri Ravi Horo, Addl. PCCF, Deptt. of Environment & Forests, A & N Islands who was the chief guest of the inaugural ceremony, spoke on the significance of the

programme and the importance of skills for Botany students as taxonomists and their role in conservation of biodiversity in the Islands. He also shared the best knowledge and skills required in becoming a good Biodiversity Conservationists.

Dr. Hemant Kumar Sharma, Principal, JNRM who was the guest of honour emphasized on the importance of

this course and urged the students to work hard and make themselves aware of the bio-diversity.

Earlier, the Regional Head, Dr. Lal Ji Singh welcomed the gathering and briefed about Workshop and Learning Modules. A total of 30 students of M. Sc. Botany have registered for the training program, a press release from BSI said.

A hands-on training session on Isolation of Mycorrhizal Fungi was conducted for M.Sc. Botany students at Botanical Survey of India on 16th October, 2024 by Dr Dipon Sharmah, HOD Botany & Puspa Kumari, Resource Person of Department of Botany, JNRM.



JNRM won Second place in the quiz competition held on 5th Oct for different colleges of the A&N Islands on the topic 'Wildlife Conservation through Coexistence'. The event was organized by the Wildlife Division, Van Sadan. K.V. Shresha and H. Nasreen Banu are both students of M.Sc. Botany I & III Sem.



Tishita Bhadra, B.Sc. I Sem secured the first position in a debate on "Can AI ever replace human creativity in writing?" organized by Dept of English, JNRM.



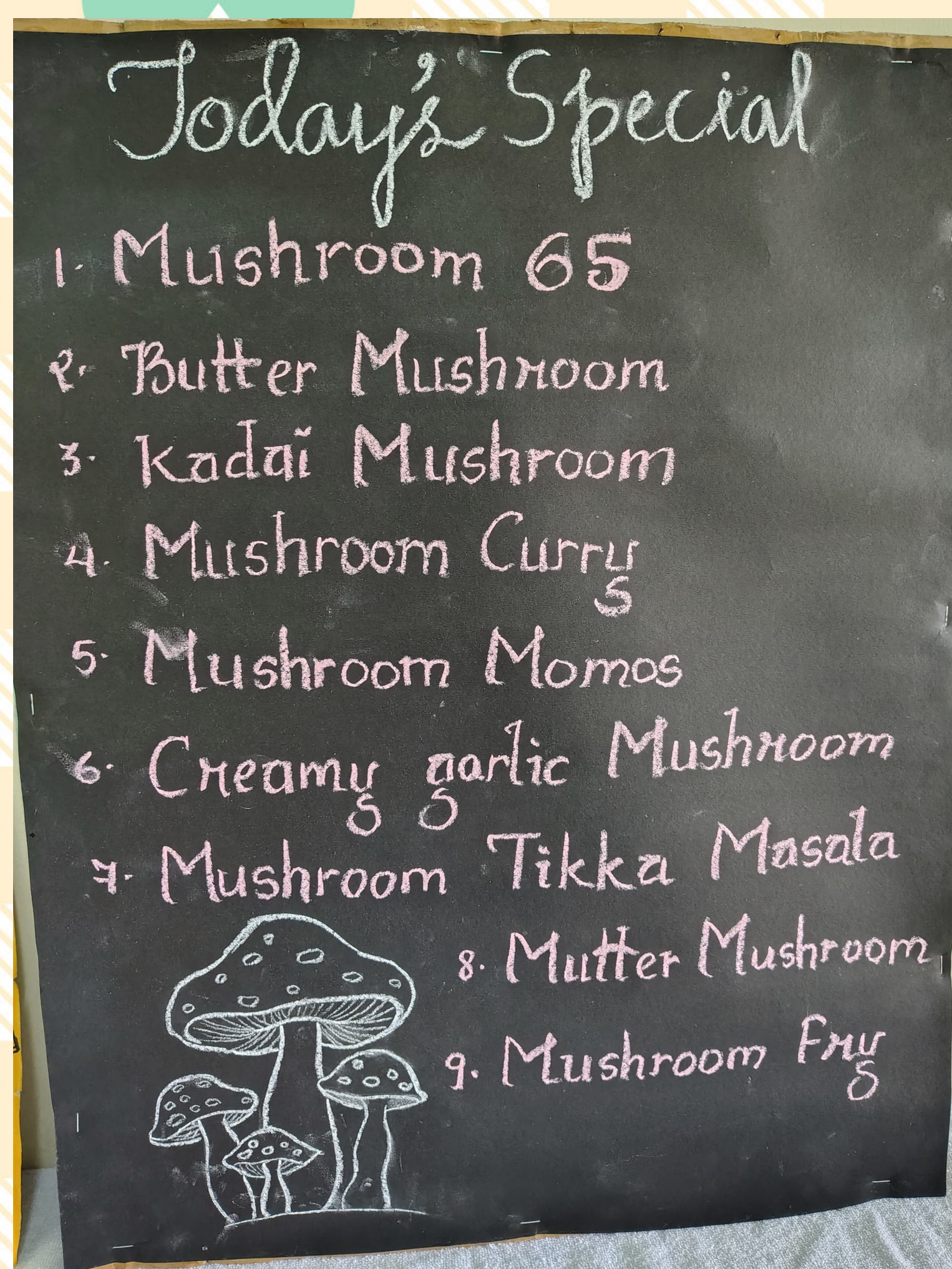
B.Sc. V semester students visited Central Island Agricultural Research Institute-Krishi Vigyan Kendra (CIARI-KVK) at Sippighat on 7th Nov, 2024



Simme Dias and Shresha KV of M.Sc Botany first year won the First Prize while Dishita Bhadra and Pujetha Kaur of B.Sc. Botany first year won the Third Prize in Quiz Competition organized by PG Dept of Geography, JNRM.



B Sc. 3rd Year students organized a Mushroom Feast showcasing a variety of delicious mushroom recipes.





B.Sc. I Sem students visited the Biological Park, Chidiyatapu and learned about its diverse flora and fauna.



M.Sc. Botany final year students participated in a field trip and classroom sessions at the Andaman and Nicobar Environment Team (ANET) station in Wandoor on 23 July 2024.



On 16th Jan 2025, B.Sc & M.Sc. students of PG Department of Botany, Jawaharlal Nehru Rajkeeya Mahavidyalaya (JNRM) visited the Sippighat Wetland to explore and understand the importance of wetlands. The students took a rally and pledged to protect wetlands.



MoEF&CC
@moefcc

.@moefcc as part of Save Wetlands Campaign @NMNHIndia sensitized B.Sc & M.Sc. students of PG Dept. of Botany, Jawaharlal Nehru Rajkeeya Mahavidyalaya (JNRM), Sri Vijaya Puram, Andaman and Nicobar Islands visited the #SippighatWetland to explore and understand the importance of wetlands in our lives. The students took a rally and pledged to protect wetlands volunteer as Wetland Mitras to protect and conserve wetlands in which 35 students participated #WorldWetlandsDay2025 #MissionLiFE.



1:50 PM · Jan 18, 2025 · 1,293 Views



Ministry of Environment, Forest and Climate Change (MoEFCC), GOI has acknowledged our 'Save Wetland' activities on their official platform!
<https://x.com/moefcc/status/1880530740896756019>



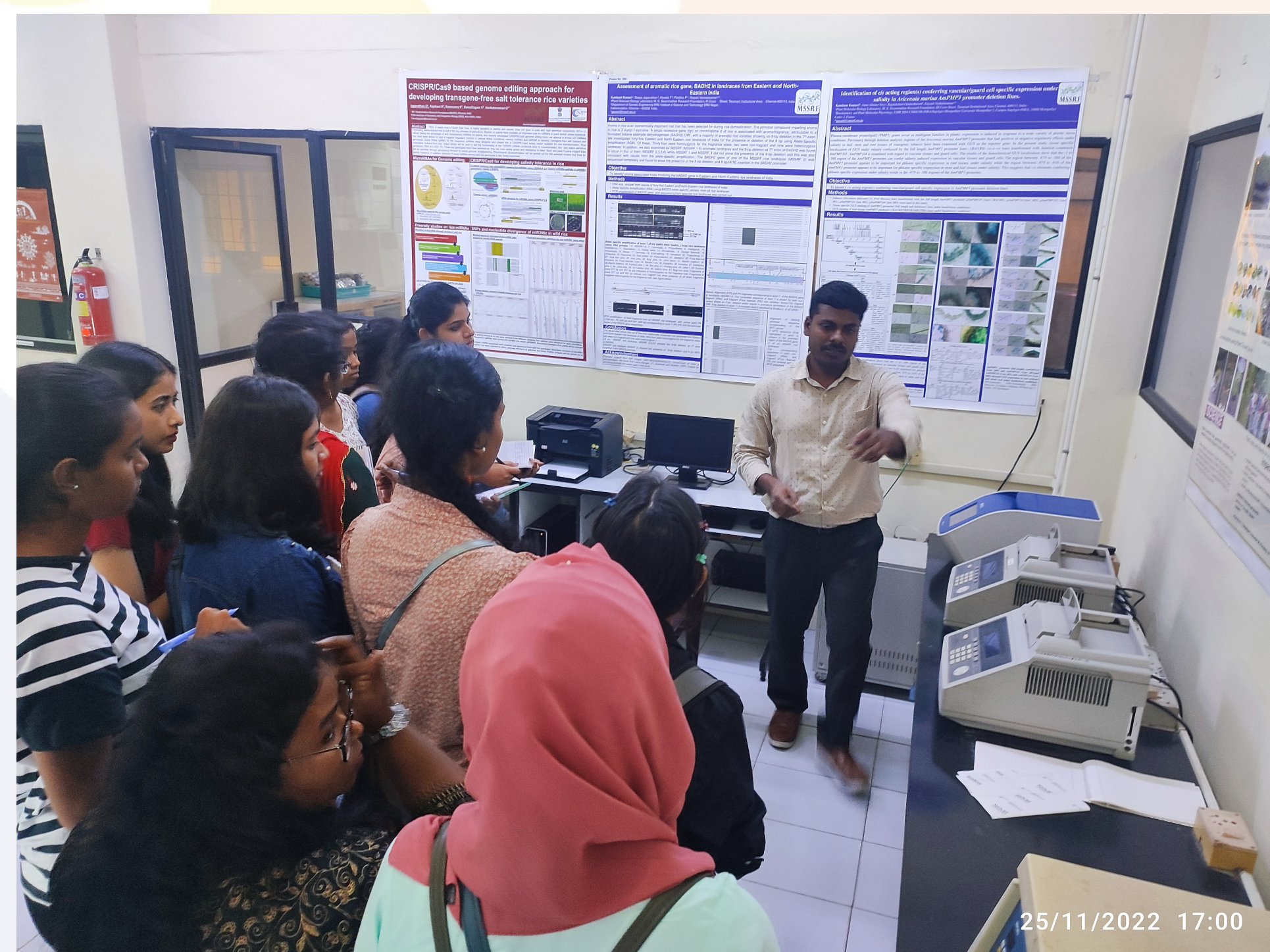
Botany Department won the Runners Up Trophy in the Inter Departmental Football competition for Girls organized by Physical Education Department in April '23.



B.Sc IV Semester Students visited Medicinal Garden, Nayasahar along with Faculty Members Mrs. Renuka M. Kherde and Dr. S. Aravind on 17th Feb, 2024



M.Sc. Students visited the MS Swaminathan Research Foundation (MSSRF), Chennai on 25th Nov 2022



M.Sc. Botany students visited the Pasteur Institute of India, Coonoor and interacted with scientist involved in vaccine production on 28th November, 2022



OUTREACH AND COMMUNITY SERVICE

have a localized vision for the fruit-bearing trees, rainwater the implementation of various

The Botanical Forum JNRM adopts Sippighat Village

Port Blair, Apr 13: The Botanical Forum, PG Department of Botany, JNRM adopted the Sippighat Village on a long-term basis. An inaugural program was organized in the Gram Panchayat Community Hall on 11th April 2022.

As part of the program, the M.Sc 1st & 2nd Year Students of the Botany Department, JNRM organized a range of activities like plantation of endemic fruit trees, demonstration of kitchen waste composting and the importance of solid waste management to the villagers and sanitary workers.

To curb plastic use, cloth bags were distributed amongst the villagers and



they were encouraged to use cloth bags whenever they go to market. To inculcate scientific curiosity among school children, the students of GMS Sippighat were given hands-on training on the use of the simple and compound microscope.

The students were shown live materials of bacteria and fungus. The pro-

gram was attended by Mrs. Jyothi, Pradhan, Mrs. Sarika, Member Zilla Parishad, Mr. M.A. Abid, Panchayat Secretary, Anganwadi workers, sanitary workers, students and villagers of Gram Panchayat Sippighat. Faculty members Mrs. Rashmi Janak and Ms. Shalini of the Botany Department, JNRM were also present on the occasion.

andamanchronicle.net/index

Range of Activities Conducted by JNRM's Botany Students in the Adopted Sippighat Village

Denis Giles – 11 January 2023



PARTICIPANTS OF VILLAGE ADOPTION

Port Blair, Jan. 10: The Department of Botany, JNRM has adopted Sippighat Village in April 2022 on a long-term basis. The adoption program, which is part of the non-audit course for M.Sc. students, is prescribed by Pondicherry University. On 9th January, as part of the adoption program, the M.Sc. 1st & 2nd Year Students of the Botany Department visited Sippighat village and organized a range of activities like plantation of medicinal trees and demonstrations of the importance



SCIENTIFIC EXPOSURE TO SCHOOL CHILDREN

M.Sc. Botany students visited Sippighat Village on 9th Jan 2023 and conducted a range of activities from plantation of saplings to teaching basic science concepts to the children of the village also conducted a workshop to teach the children about the basics of Poster making

OUTREACH AND COMMUNITY SERVICE

‘जेएनआरएम’ के वनस्पति विज्ञान विभाग द्वारा गोद लिये गये गांव सीपीघाट में कार्यक्रम आयोजित

पोर्ट ब्लेयर, 10 जनवरी।
यहां के जवाहरलाल नेहरू राजकीय महाविद्यालय ‘जेएनआरएम’ के वनस्पति विज्ञान विभाग ने अप्रैल, 2022 में दीर्घकालिक आधार पर दक्षिण अंडमान के सीपीघाट गांव को गोद लिया है। गोद लेने का कार्यक्रम, जो एम. एससी. छात्रों के लिए गैर लेखापरीक्षा पाठ्यक्रम का हिस्सा है, पांडिचेरी विश्वविद्यालय द्वारा निर्धारित किया गया है। गोद लेने के कार्यक्रम के तहत 9 जनवरी, 2023 को वनस्पति विज्ञान विभाग के एम.एससी. प्रथम और द्वितीय वर्ष के छात्रों ने

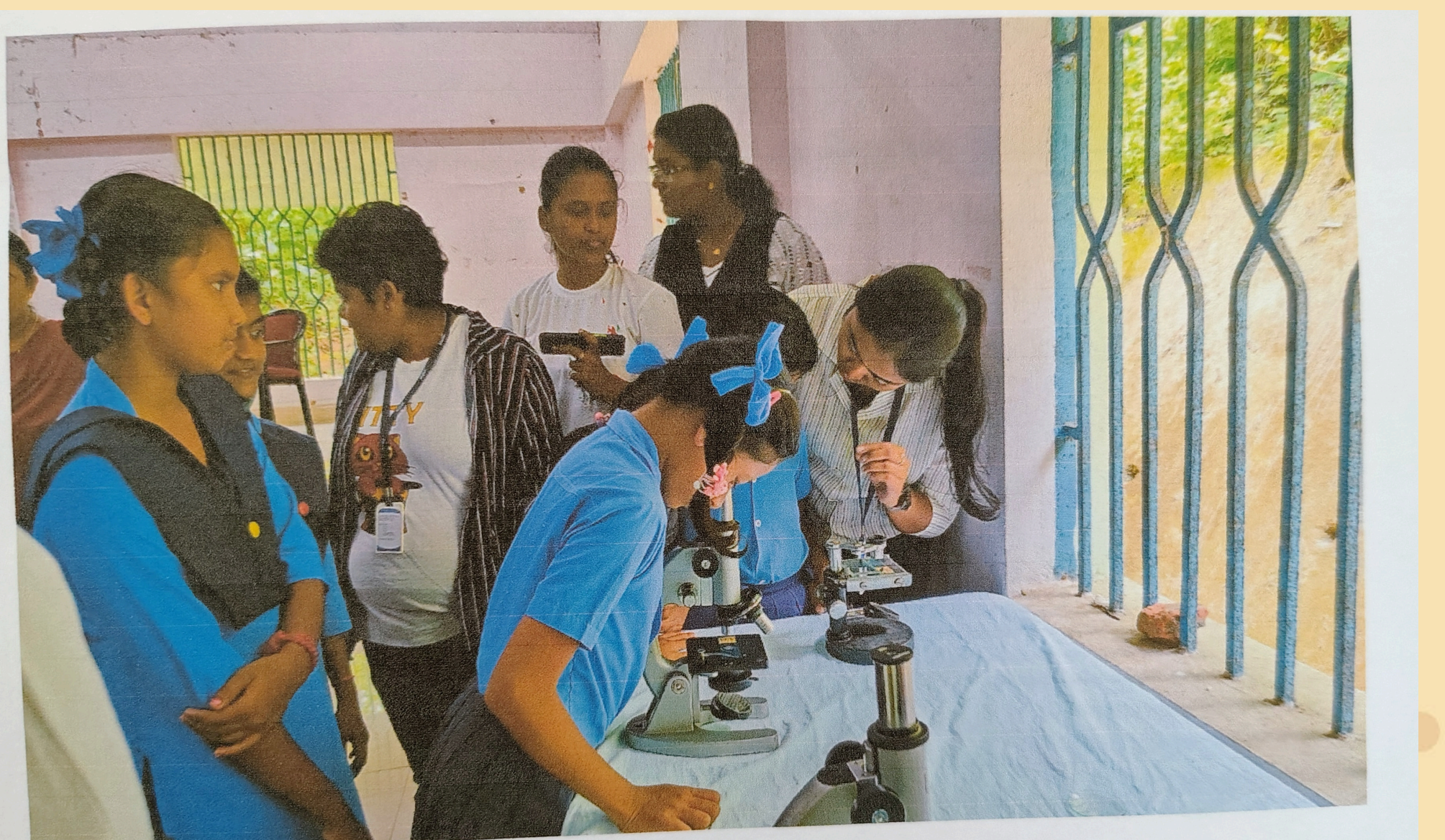


सीपीघाट गांव का दौरा किया और औषधीय पेड़ों के रोपण और दैनिक जीवन में जड़ी बूटी दवा के महत्व के प्रदर्शन जैसी कई गतिविधियों का आयोजन किया।

प्राप्त विज्ञप्ति के अनुसार गांव के बच्चों के लिए

स्वच्छ पृथ्वी, हरित पृथ्वी जैसे वैज्ञानिक विषयों पर पोस्टर बनाने की कार्यशाला आयोजित की गई। उनमें वैज्ञानिक जिज्ञासा पैदा करने के लिए उन्हें कई सरल जैविक प्रयोग भी दिखाए गए। कार्यशाला में

शेष पृष्ठ 4 पर



SCIENTIFIC EXPOSURE TO SCHOOL CHILDREN

M.Sc. Botany students visited Sippighat Village on 26-27th Feb & March 6, 2024 and conducted demographic studies pertaining to health status, education level, economic status, cultural diversity, environmental concerns, technological access etc.

A Memorable Day at ANET

On 22nd July, 2024, my friends and I embarked on a one-day field trip along with Shalini Madam to the Andaman Nicobar Environment Team (ANET), Wandoor. ANET is a multidisciplinary research hub, environmental conservation centre in the Andaman Islands. It is about 24 kms from our college.

We took a bus and reached Wandoor Junction. From there, we boarded a jeep and reached ANET. The jeep journey was very exciting.

At exactly 9 a.m., the first session started. A brief introduction and history of ANET was given by Krishna Anujan, a research fellow at ANET. She also provided us with an excellent presentation on her research about the Malayalee Mango Mystery.

*After the completion of the session, all students were divided into four groups. We walked around and explored the vast and beautiful ANET campus. We were very excited as we observed nature and different plant species, such as Coroyo (*Tabernaemontana crispae*), Wild Areca Palm (*Areca triandra*), Amberoi or Papita (*Pterocymbium tinctorium*) and many more. We observed fresh leaves, flowering and fruiting stages of these plants.*

We were also introduced to the SeasonWatch App, which we downloaded from the Play Store. The app helps monitor seasonal changes through tree observations. During

our walk at ANET, we used this app to register the plants we encountered. Through this, we gained valuable knowledge about research and fieldwork.

After the walk, we returned to the conference hall. The next session included an engaging task where Krishna Anujan Ma'am asked us to write about "What You Know" & "What You Believe." Everyone participated enthusiastically and gave their best.

After completing this session, we visited the ANET library, which housed various books that would be very helpful for our thesis work. Then, we all gathered again in the conference hall, where we were presented with another session showcasing various interactions between participants of the Local Voices in Conservation Programmes. This presentation was based on Krishna Anujan Ma'am's research along with her fellow researchers.

The interaction featured local voices from Madhya Pradesh. She also shared insights from her research at Kanha National Park.

After the completion of this session, we all headed to the dining area for lunch. After lunch, we returned to Wandoor Junction to catch our bus. We all reached home safely by 3.00 p.m.

My one-day field trip to ANET was an enriching and enjoyable experience. I learned a lot about different plant species and the unique and beautiful places on our island. It was a fantastic experience!

BY SHAREEN SHAHID

BOTANICAL ADVENTURE

My friends and I embarked on a three-day educational trip to Shaheed Dweep (formerly Neil Island). It is a tiny and beautiful island and is approximately 40 kilometres from Port Blair. The tour was a part of our M.Sc. course curriculum and was organised by the Department of Botany, JNRM. Our esteemed Head of Department (HOD) supervised and meticulously planned the tour, ensuring a smooth experience for everyone. The study tour comprised students from the final year of M.Sc. Botany, including Neela Aunty (department lady staff) and our HOD sir.

One fine morning, we reached the Phoenix Bay Jetty. Our tickets were pre-booked. At around 6.30 am, we boarded the government passenger ship, MV Kamorta. The journey was breathtaking. As we left the jetty, I got the opportunity to view my beautiful island from the sea. We saw flying fish and marvelled at how these tiny ray-finned fish have evolved this gliding ability to escape predators. We also had light refreshments while enjoying the beautiful view of the faraway islands. We arrived at Neil by 8.30 am and headed straight to our pre-booked resort, Neil Banjara, taking shared autos.

We were hungry and enjoyed a delicious breakfast of puri-sabzi and tea. Afterwards, we were assigned rooms with three members in each. Our rooms were quite nice, and after freshening up, we gathered at the reception. There, Sir instructed us about the places we would visit and the schedule for each location. We left the resort around 11 am and

visited Laksmanpur Beach, where we explored the area and learned about various local plant species.

We took pictures of the beautiful coastline and different plant species. We learned many new things. Our HOD explained the types of forests found on Neil Island, highlighting their characteristic features. Neil Island boasts a tropical forest habitat where climbers and creepers grow luxuriantly. Here, the soil is comparatively less fertile than in temperate regions. This is because the place witnesses a lot of rainfall and sunlight, resulting in mineral leaching. This makes the soil poorer in humus content. Also, sir told us about the importance of the wood-wide-web (www), an intricate underground network of fungi that connects the roots of trees and other plants in a forest ecosystem and facilitates nutrient exchange.

*On our way to Laksmanpur Beach, the showy flower of Andaman Planchonia (*Planchonia andamanica*), a plant native to these islands, stole our attention. The wild petunia (*Ruellia simplex*) was blooming and everyone admired its trumpet-shaped flowers. On our way, we also saw sea hibiscus or beach hibiscus (*Hibiscus tiliaceus*), prominently displaying its yellowish-orange flowers and heart-shaped leaves. This plant can tolerate salty conditions and thrive in sandy soils. Naturally, it becomes a good choice for coastal gardens. We were intrigued to know how beach morning glory (*Ipomoea pes-caprae*), with its extensive root system, can prevent erosion and play a crucial role in stabilizing coastal areas.*

After exploring the rich flora, we returned to the resort for lunch. We rested for a while and headed towards Laxmanpur Beach for the sunset view. I was amazed to see the beautiful view of the sunset. Even though the beach was crowded, we captured every moment of the sunset. The weather was pleasant and we enjoyed walking along the shore collecting seashells.

The internet connectivity is poor on Neil Island. Thankfully, the resort provided us with wifi. We all sat in the common area and shared and posted pictures of the beautiful day on social media.

The next day, I woke up early and enjoyed the sunrise from our room's corridor. After a delicious breakfast, we went to Bharatpur Beach. The beach is famous for water activities. We went for glass-bottom boating, which was an exciting and enjoyable experience. We saw different types of corals, such as finger corals, table-top corals, mountain corals and mushroom corals. The colourful fish swimming beneath our boat was a great sight to watch!

After the exciting boating experience, we found a serene spot on the beach. We relaxed there, enjoying some snacks and juices. The amazing sea view mesmerized me. At around noon, during low tide, we went to see the famous Natural Bridge at Lakshmanpur Beach. The Natural Bridge, a living coral formation, is nicknamed 'Howrah Bridge' by the locals. We took many pictures of the bridge, amazed by the sight of starfish swaying along the waves. Pure bliss!

By 2 pm, we had returned to the resort and had lunch. We were very tired from the

full-day activities. We rested for a while, and in the evening, we discussed the possibility of exploring a farm the next day, self-cooking and witnessing the diversity of plants in its vicinity. Luckily, one of my friend's uncle, a kind-hearted soul, helped us enormously in finalizing our plan. He consented to provide his farm for plant exploration. We found different species of Colocasia and bought a few for our home. Sometimes, due to erratic cargo arrivals, potatoes become a rare treat on the A & N islands. So, we were naturally drawn to the air potatoes (*Dioscorea bulbifera*), and many of us collected them. We also collected the saplings of one of the hottest chillies, called Bombay Mirchi. It was great fun exploring and cooking on our own. We enjoyed watching nature, the pond, ducks effortlessly gliding on water, and the vibrant dance of the dragonflies and colourful butterflies.

Thereafter, all of us had a very yummy meal. A local sweet dish, Neil's Rasgulla was part of the feast. As the saying goes, 'If you don't eat rasgulla while in Neil Island, you have missed out on something.' Honestly speaking, I learned an important chapter of my life - the importance of working together and collaborating to accomplish our shared goals.

Finally, it was time to wrap up our wonderful journey. We arrived at the Neil Island jetty. After boarding the ship, my friends and I headed to the top deck to enjoy the beautiful sunset. We reached home safely by 7 pm.

Our educational tour of Neil Island was an enriching and enjoyable experience. I learned a lot about different plant species and the unique biogeography of the island. It was a great experience that will stay with me for a long, long time.

The Evolutionary Romance Between Plants and Animals

Let's imagine for a moment that you're a palaeontologist. And you are exploring some ancient rocks in some areas famous for dinosaurs. It can be China, Argentina or Utah. And luckily you chanced upon a fossilised bones of a giant dinosaur. How did it grow so big?

*According to paleontologist Riley Black the answer lies in plants. In her latest book *When the Earth Was Green*, Black explains how plants shaped the prehistoric world and influenced animal evolution.*

When plants moved onto land, they did so in the company of fungi. They changed the planet. They provided food, shelter and oxygen. This encouraged animals to leave the ocean. Black argues that plants and not fish, were the true pioneers of life on land.

The book takes readers on a journey through time. It describes Earth 1.2 billion years ago. Back then, there were no forests, fish or even seashells. The oceans were filled with tiny organisms like red algae. These simple plants were among the first to turn sunlight into energy. This paved the way for larger plants to evolve.

She also shares fascinating stories about giant dinosaurs. These giants ate tall ferns and cycads. Their plant-based diet was so massive that it contributed to climate change through methane emissions! Black's book shows how plants and animals evolved together in an "ecological romance."
(Courtesy: Adapted from ScienceNews)

THE KARVI BLOOM

Once every eight years, the Western Ghats mountains turn purple! You might wonder why? A special flower called Karvi is the reason behind the purplish hue.

Its scientific name is Strobilanthes callosus. This plant only grows in these mountains and blooms together covering the hillsides.

Recently, the conservation centre of the Bombay Natural History Society (BNHS) conducted a Karvi bloom nature trail in its Mumbai campus!

Karvi plants like to grow on rocky places with poor soil. Every eighth year, they bloom with thousands of purple flowers. This attracts bees and other insects that help the plants grow.

Scientists don't know exactly why Karvi plants bloom together every eight years. It's a mystery!

People love to see the Karvi flowers bloom. They have festivals to celebrate this special event. It's a beautiful sight that reminds us of how amazing nature is.

AMAZING WORLD OF MANGROVE

Wide roots, wide refuge : guardians of the coast

Mangroves are trees that grow in salty water near the sea. They have strong and tangled roots. These roots hold the soil and protect the land from big waves, storms and erosion.

These trees are great habitats. They are home to many birds, fish and crabs. It is the perfect hunting ground for kingfishers, herons and giant monitor lizards.

In the soft soil beneath mangrove roots, thrives burrowing species such as snails and clams, while others like crabs and shrimps forage in the fertile mud. The tons of leaves that fall form the basis of an interesting food web.

The Andaman and Nicobar Islands

have rich mangrove forests. These forests help protect the islands from tsunamis and cyclones.

A few common species of mangroves found here are: Rhizophora apiculata (Tall-Stilt Mangrove), Rhizophora mucronata (Asiatic Mangrove), Bruguiera gymnorhiza (Burma Mangrove), Avicennia officinalis etc.

We must protect mangroves. We can do this by planting more mangrove trees and by keeping the beaches clean. All of us should learn about their importance. If we take care of mangroves, they will take care of us.

BY SIMME DIAS

The Hidden Wood Wide Web

Everyone knows that www stands for World Wide Web. But do you know that trees and plants also have an underground network that allows them to "talk" to each other? This amazing communication happens through something called the Wood Wide Web. It's like an underground network made of fungi!

Fungi are tiny organisms that grow in the soil. They form a network of thin threads called mycorrhizal networks. These threads connect the roots of different plants and trees. This helps them to share nutrients and water. Sometimes they even warn the plants about dangers like pests or diseases.

For example, if a tree is attacked by insects, it can send a signal through the fungal network to nearby trees. After receiving the signal, these trees then produce chemicals to protect themselves. Through these networks, trees also share food! If a tree is strong and healthy, it can send nutrients to a weaker tree nearby and help it grow.

The Wood Wide Web shows how nature is full of teamwork and cooperation. It reminds us that even plants have their own way of helping each other to survive. Isn't that amazing? So, next time whenever you stroll through the woods, remember that the roots beneath your feet are silently communicating with each other. Nature truly is full of wonders!



A glimpse of Botany Department



*Botany Department Corridor -
Repository of Medicinal & Ornamental Plants*



Wall Magazine - DAFFODILS

MEET OUR EDITORIAL TEAM

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4. H. NASREEN BANU - M.Sc. IV SEM
5. KV SHERESHA - M.Sc. II SEM
6. PRIYANKA MALLICK - B.Sc. VI SEM



1.



2.



3.



4.



5.



6.



7.

Beautiful entries by students



Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

~ Robert Frost



Time is the most valuable thing a man can spend.

~Theophrastus

BOTANY DEPARTMENT

JAWAHARLAL NEHRU RAJKEEYA MAHAVIDYALAYA

SRI VIJAYA PURAM, A & N ISLANDS

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