

Department of Botany// Maitreyi College// University of Delhi



Vitti



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MESSAGE FROM PRINCIPAL'S DESK



It is a matter of immense pride for the institution, as yet another endeavour of our students comes to fruition. The second issue of *Vitti*, newsletter of the Department of Botany, testifies to our students' creativity, skill and ideational competence. The content of this issue combines botanical knowledge, with a vision for conscious living. Thus, this publication rings true to the essence of its title *Vitti*, that indicates understanding, consciousness and intelligence manifest in word, deed and thought.

This newsletter is a platform to encourage innovative thought and its expression amongst students, preparing them for greater heights in years to come! I congratulate the contributors, the editorial team and the faculty of the Department of Botany for putting together this insightful publication!

Best Wishes

Prof. Haritma Chopra

Principal (Offg.), Maitreyi College, University of Delhi



EDITORIAL



EDITOR-IN-CHIEF

Welcome to the “Vitti” the annual newsletter for the Department of Botany, Maitreyi college.

As we head into our second year of publication, encouraged by the response to first edition of “Vitti” it is our pleasure to bring to our readers- students, parents, educators- news on various events and activities that took place in the Botany department, Maitreyi college in the year 2021-22.

This year students and teachers were thrilled to come back to the classroom mode of learning and experienced the life at Botany department, Maitreyi college. On the other hand, learning also continued through online classes as well as events. This year, thus presented to us a unique model of blended learning and life experience. “Vitti” 2021-22 reflects on these. This edition seeks to enhance readers knowledge through articles on new ways of sustainable lifestyle, facts and brainteasers, documentation of various departmental events such as webinars, alumna interaction, visits to research institutions etc. It is further enriched by the experience sharing of the alumni and we are thankful to them.

As teachers we prepare our students to face the challenges of life and develop their skills, so it is very heartening to see that “Vitti” showcases their creativity, freedom, self-expression, and uniqueness through their contribution for this newsletter. One can witness the vibrant colors of Department of Botany, Maitreyi college while reading this issue of “Vitti”.

I congratulate and thank all the contributors, editorial team members, and faculty members for their hard work and support.

With Best Wishes

Dr. P Kavita

(Senior Assistant Professor, Department of Botany,
Maitreyi College, University of Delhi)

OUR TEAM



EDITORIAL HEAD

It was an incredible honour to be a part of the newsletter team. I hope that reading this newsletter will influence readers and encourage them to influence others. We may never realise how much our words and actions affect others around us. "Vitti" encompasses all of the young brains' extreme writing down feelings and talents, as well as the illation of the Department's accomplishments. I am grateful to all of the participants for their active engagement, as well as the full "Vitti" team. Just wanted to express my gratitude to Dr. Kavita ma'am for her unwavering support and guidance. Thank you for everything you do!

Shweta Tiwari

B.Sc. (H) Botany, IIIrd Year

CREATIVE HEAD

I am very fortunate to be a part of "Vitti" as a creative head for the second time in a row. "Vitti" surfaced the inner potential in me in the best possible way. It's quite apocalyptic and amazing at the same time how a human mind works in this eternal interaction of energies around us. This issue is an interwoven piece of creativity, put together by the amazing minds of students of the botany department. I am very thankful to Dr. P Kavita ma'am for providing this opportunity and to the team members for consistent efforts. I hope this issue brings a light of knowledge to the readers.

Jyoti Singh

B.Sc. (H) Botany, IIIrd Year





Monalin Panda
B.Sc. (H) Botany, IIIrd Year



Jeena Thingujam
B.Sc. (H) Botany, IIIrd Year



Priya Boora
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Herbal Pink Tea- Brewed to a Healthy Lifestyle

-Priya Boora, IIInd Year



Tea- A daily cup of joy for many people is much more than just a hot, flavoured liquid. It can change the mood to good, relieving all stress. Sipping a tea is a complete sensory experience in itself with an appreciation of culture, tradition, lifestyle, and tang. The tea experience is nigh unmatched for tea lovers.

True tea- whether it is an oolong, white, black, green, hot, or iced-comes from *Camellia sinensis* -the tea plant, but this is not true for all teas. Herbal teas are brews made from the combination of hot water and extracts of botanicals like fruits, flowers, barks, herbs, mints, spices, roots, berries, and seeds.

Pink tea- Brewed to a Healthy Lifestyle

<https://www.metro.us/3-popular-uses-for-herbal-tea/>

These herbal infusions do not contain any tea leaves but still are packaged like tea, infused like tea, and enjoyed like tea.

Herbal tea has gained popularity among health-conscious individuals, healing them naturally. Herbal teas are also called 'tisanes'. These not only quench the thirst but are also good for digestive health. The wide varieties of herbal tea with beautiful natural colours provide the warmth for nourishing health, soul, and mind.

One such cheerful herbal tea to sip is the Kashmiri Pink Tea or the Noon Chai. The Noon Chai is the traditional beverage of Kashmir valley and is loved by all whosoever lifts the cup of Noon tea to their lips. This fabulous pink concoction is a blend of natural green tea leaves, ginger, cardamom, cinnamon, and saffron that can be complemented with rose petals and garnished by dry fruits.

Its pretty rosy texture soothes the eyes and its warm taste with rounded flavours is a relish to the body since time immemorial.

Noon Chai was introduced by Shah-e-Hamdan, a popular Muslim missionary, into the Kashmir Society at the time of deeply ingrained alcohol consumption in the Kashmiri Culture because of its bitterness as of alcohol but was not intoxicating. It, then, became a good substitute for alcohol keeping people sane at the same time. The Gulabi Chai is traditionally brewed in a Copper Samovar which has etched motifs symbolizing the cultural landscape of the Kashmir Valley. Initially, a Kehwa (tea base) is prepared with Kashmiri or Green Tea leaves and spices like cinnamon, cloves, and green cardamom. And then kehwa is boiled with milk and salt. Nowadays, people even add sugar to give it a richer taste. The secret to the beautiful rosy shade resides in the baking soda and tea leaves reaction, and the 'kehwa' beating. The more the air incorporated in 'kehwa' the richer the pink tint in tea is. It is a wholesome dish in itself enjoyed by many people, especially at breakfast time for a good refreshing start of the day.

This savoury drink, a variant of spice-laden Indian tea, rewards us with many health benefits:

- Better Digestion- Gulabi Chai helps the digestive system, the reboot required to clean the stomach. Also, one of the fundamental benefits of herbal tea is to improve metabolism which is also provided by the pink herbal tea.
- Burns Fat- Noon Chai cleans up the unwanted body fat and cholesterol from the blood vessels reducing the risk for cardiovascular diseases.
- Beef up Immune System- Noon chai is the reservoir of potassium, magnesium, vitamin C, and sodium that helps in strengthening the bones and helps in regulating blood sugar levels. Anti-inflammatory and immune-booster are the rich names given to Noon chai.
- Quells Stress- Gulabi Chai is a refreshment to the soul in summers and resists cold during winters. It consists of L- theanine, an amino acid component that helps in reducing stress and anxiety.
- Provides Glowing skin
- Also, pink herbal tea contains a very little amount of caffeine and thus does not hinder sleep.

Because of its pros, the pink herbal tea has now become a boon to mankind for a healthy lifestyle but yes anything in excess can cause problems. So, 1-2 cups a day of Noon chai keeps the person ready to go and refreshing to grab the opportunities all day long. After all, it is all about the BALANCE. So, ditching the traditional tea and switching to pink herbal tea is a healthy decision for a refreshing and sustainable lifestyle.

WOMEN BOTANICAL ILLUSTRATORS

-Jeena Thingujam, IIIrd Year

Wilfrid Blunt *“The botanical artist can serve the scientist or the artist. The greatest do both and find the beauty in truth, who understand plants scientifically yet understand them as an art form. A great botanical artist must have a passion for flowers”.*

Botanical illustration is the scientific description of plants and plant features using accurate graphical representations. Before we were able to take detailed color photographs of plants, botanical illustration was the only way of visually recording the world's many species of plants. The original intent of these illustrations was to aid in plant identification for medicinal and culinary uses. Botanical illustration's aesthetic splendor has captivated and inspired people for generations. It has served as an indispensable tool to help identify and understand plants in a timeless manner.

In this field of illustrated botany, women have played a significant role. During much of the period (17th-20th century), despite not being enrolled in many universities, women opened the way to science through the arts. Unforgettable illustrators of these fields include-

Maria Sibylla Merian (1647-1717)

Maria Sibylla Merian is rated as one of the greatest painters of botanical illustration. She ran the only all-female scientific illustration workshop in Europe during her lifetime. She was born on April 2, 1647, in Frankfurt, Germany, and is well known for her botanical and insect illustrations. With the help of her stepfather Jacob Marrell, a Dutch flower painter and teacher who taught her the art of flower painting; she became a proficient painter, and engraver, with an unequivocal artistic style, skill, and dedication.

At the age of 52, Merian traveled to Suriname, a country in South America. For 2 years she studied flowers and insects and made hundreds of drawings on Vellum. The result of this was her most noteworthy and magnificent publication *Metamorphosis Insectorum Surinamensium*, in 1705. She described the life cycles of nearly 200 species of insects and amphibians. Every picture seems to depict a drama, as Merian often depicted the insect's natural predator as well- like monstrous lanternflies, and a cicada, hovering around a flowering double-blossomed pomegranate tree.



Image of Maria Sibylla Merian (1647-1717)



Illustration by Maria Sibylla Merian

Elizabeth Blackwell (1700-1758)

Born Elizabeth Blachrie in 1700 she was the first British woman to produce a Herbal called "A Curious Herbal". It was the first medical book to be illustrated. All the 500 images in the book were hand-drawn, engraved, and coloured by herself. The plants illustrated were from the Chelsea physic garden. She undertook this project to raise funds to release her husband, Alexander Blackwell from a debtor's prison. She worked nonstop to release 4 plates of the herbal weekly between 1737 and 1739.

The herbal was used by physicians as a reference book to identify plants gaining an important place in the scientific field. The beauty of her work continued to resonate throughout even after her death. For her work, Carl Linnaeus gave her the affectionate nickname of Botanica Blackwellia.

Marianne North (1830-1890)

Marianne North was a renowned botanical painter and Victorian plant collector. She explored many countries in pursuit of fascinating plants to paint.

The result of these epic journeys can be seen in the Marianne North Gallery at Kew, where her incomparable artworks of brightly coloured paintings of flowers, landscapes, animals, and birds are arranged.

Between 1871 and 1885 Marianne painted over 800 paintings while visiting America, Canada, Jamaica, Brazil, Tenerife, Japan, Singapore, Java, Sri Lanka, India, Australia, New Zealand, South Africa, and many more in a period of 14 years. In India she stayed for 18 months visiting a number of places; in Brazil, she spent 13 months traveling across very rough terrain. Some of the plants she painted proved new to science. In her honor, a genus (*Northia*) and 4 species (*Nepenthes northiana*, *Crinum northianum*, *Areca northiana*, *Kniphofia northiana*) were named after her.

Her legacy continues to live on in the gallery, providing visitors to Kew with the chance to explore the amazing world of plants represented by her paintings.



A picture from the Kew: Botanical Gardens gallery



A page from Elizabeth Blackwell's book "A Curious Herbal"

BLOGS

DELHI, DIWALI, & STUBBLE BURNING



Diwali, is the spectacular festival of lights celebrated all over the country. It symbolizes the victory of light over dark, good over evil, and knowledge over darkness. Diwali used to mean bringing light and pleasure to the world, but now it's all about the firecrackers. Nowadays, Diwali just become a synonym for a night full of crackers, noise, and smoke; the brighter the sparkles, the louder the noise, the greater the thrill, greater the status of society. Fireworks burst because it is beloved that drive away evil spirits so as not to harm the environment. Today this festival has become a combination of gloom, darkness, despair and health problems, environmental degradation, and murk.

This year Diwali was celebrated on 4 November and the next day “THE HINDU- MORNING DIGEST” quoted in their articles, ‘Delhi gasps for air as cracker ban goes up in the smoke’, “Delhi’s air quality turns ‘severe’, or Delhi air quality hits hazardous level after Diwali”, and so on. People woke up to a thick blanket of smog shrouding the skies, itching eyes, and blaming farmers for stubble burning. Like Delhi, the capital city is surrounded by Haryana, Punjab, and Uttar Pradesh; all three states are majorly concerned with agriculture. And October & November along with Diwali are also the time for harvesting rice and the region gets trapped in the fire of farms.

And truly speaking if we think about Delhi, the population automatically synchronizes this. The development comes no doubt, but the national capital looks to tackle the menace of high levels of air pollution with the onset of winters which coincides with stubble burning in the neighbouring states. This leads to an increase in the level of pollution in Delhi during winter, one of the main reasons being the burning of stubble, but we can't ignore the other factors.

Now, the Delhi government in collaboration with the scientists at the Indian Agricultural Research Institute has found a solution to the problem of crop residue burning. Yes, a bio decomposer named PUSA, can turn crop residue into manure in 15 to 20 days and therefore can prevent stubble burning. This Pusa decomposer is a low-cost microbial bio enzyme that is beneficial for decomposing crop residues like paddy crops stubbles. It decomposes the stubble and converts it into manure, thus also improving soil health and providing a basis for organic farming. It is a mixture of seven fungi that produce enzymes to digest cellulose, pectin, and lignin present in paddy straw which also requires an optimum temperature of 30 to 32 degrees Celsius.

Using this a total of 2000 acres of basmati paddy fields were treated last year. However, the Delhi government will receive a free bio-decomposer that will be sprayed on both basmati and non-basmati fields. It is estimated that 4000 acres of land will be covered this year. And if the demand for bio decomposers increases the production will be increased. After spraying the bio decomposer, the stubble turns into manure and the fertilizer efficiency also increases, which attracts farmers to this innovative, eco-friendly approach.

Apart from stubble burning, there are many other causes of pollution, which need to be addressed. Some of the contributions are stubble, the rest of pollution in Delhi, is particularly of Diwali crackers, industries, etc.

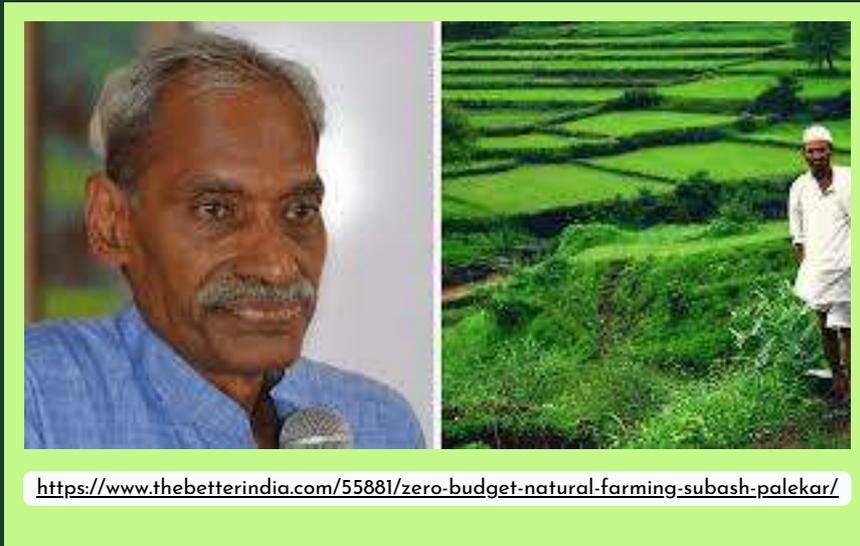
So let's see after the effective ways to resolve the problem of stubble burning, what will be the next reason and solution for the pollution in Delhi.

SAVINA

B.Sc. (H) Botany, IInd Year

ZERO BUDGET NATURAL FARMING

– A Time Changer in the Era of Modernity



“The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of a human being” – Masanobu Fukuoka, Japanese scientist and developer of Natural farming and also called the ‘Fukuoka method’ or ‘do-nothing farming’. Do nothing farming refers to avoiding the use of non-natural inputs like chemical fertilizers or pesticides and aims to enhance the production of the yield. The basic idea of this method was put together into execution by Mr. Subhash Palekar and the state farmer association KRRS (Karnataka Rajya Raitha Sangha).

It mainly relies on a fermented mixture of urine and dung of native Indian cows, which supposedly increases soil microorganisms, boosting crop health and doing away with the need for chemicals. There are a lot of questions that arise in our mind like Why is it called ‘Zero budget natural farming’ (ZBNF)? When it is possible to do farming with zero investment?; What is the reason to give importance to this in place of other projects?; Is it possible to achieve food security by just using traditional methods and being able to help farmers in doubling their income? and many more.

Various studies linked farmers' suicides to debt, as it is one of the major problems for Indian farmers. Under these circumstances, zero budget natural farming ensures the ending of the debt cycle as the phrase ‘zero budget’ means without using money and ‘natural farming’ means farming with natural inputs. As there is no need to spend money or take loans for external inputs, the cost of production could be reduced and farming made into a “zero budgets” exercise. Palekar explains many ways for adopting this method like intercropping so that costs will be compensated for by income. Local species of earthworm and cow dung are also mentioned as the most beneficial manure. So it’s clear that ZBNF farmers have a better capacity to increase their incomes.

A zero-cost environmentally friendly farming system is a timely initiative at a time when chemical-intensive farming is causing soil and environmental deterioration. Not only crops, not only food, it is like a miracle for mother earth and biodiversity. It encourages aeration of the soil, limited watering, intercropping, bunds, and topsoil mulching while discouraging excessive irrigation and deep ploughing. As being a farmer-rich country, the Government of India also promotes it by various schemes, the Union Budget of 2022-23 has proposed to promote chemical-free natural farming throughout the country, starting with five-kilometer-wide land lanes along the Ganga. The Budget also proposed upgrading the curriculum in agricultural universities to include courses on ZBNF.

*Savina
B.Sc. (H) Botany, IIInd Year*

Farming in a body farm

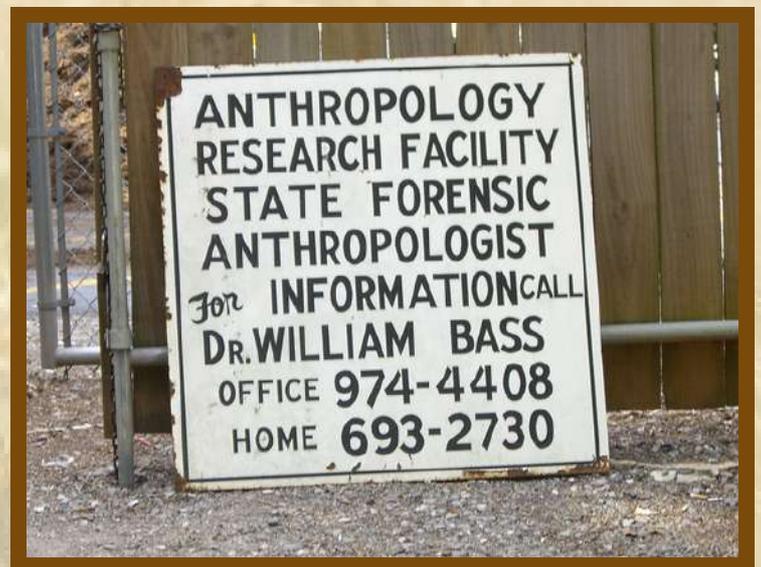
JEENA THINGUJAM
B.SC. (H) BOTANY, IIIIRD YEAR

When we think about farms we think of the crops, the greenery, and the animals but in the so-called body-farms are scattered half a dozen of human cadavers.

Millions of people die every day around the world. In many of these cases, the corpse is never found, the criminals are never prosecuted, and the victims' families are never given closure. But imagine the idea of plants telling us about dead people buried under their canopies and all we have to do is to listen to what they are telling us. This notion may not be so far-fetched after all plants are used to responding to changes in their environment. A change in the plant's phenotype- its physical characteristics might be used to pinpoint where someone has died to help in body recovery. This topic is the major research going on in the so-called body farm of Tennessee, Knoxville

The University of Tennessee's forensic anthropology center is known colloquially as the body farm was started by Dr. William M. Bass in 1987. Isolated from the rest of the world by razor wires, it is a research facility where scientists study how different environmental factors influence the decomposition of donated human bodies. And as the bodies decompose researchers from UT and across the world are watching and documenting changes.

After death, the body's microbiomes go haywire and puncture the body flooding the ground with fluids of nutrients. According to one estimate, an average human body consists of 50-75% nitrogen, phosphorus, potassium, and potassium, and every kilogram of dry body mass eventually releases 32g of nitrogen, 10g of phosphorus, 4g of potassium, and 1g of magnesium into the soil.



Purging of these nutrients in the soil causes a surge in chlorophyll levels of nearby plant species creating a “greening effect”. Suspicious to a forensic botanist - an incredibly green area of vegetation among a zone of less green vegetation. More particularly, scientists will examine the effects of human decomposition on the nutrient concentrations in the surrounding soil as well as the consequences on plant physiology. Chlorophyll in plant leaves fluoresces, releasing light that can be detected with sophisticated optics. The human eye cannot see this signature, but modern technologies can. It’s known as hyperspectral sensing. These gadgets can detect visible and infrared light across the electromagnetic spectrum. Fluorescence is a specific sign of what’s inside the cell walls of a plant leaf.

How fast those changes may appear and whether they can be detected with drones is being investigated by researchers at the Body Farm. Part of the aim is to actively engage scientists, institutions, and agencies in research and training for students and professionals all over the world. This is all still theoretical, but if it works the findings could help determine guilt or innocence in homicides. The result could help police locate missing people using drones equipped with technology that detects abnormal leaf colors, indicating a body saving hundreds of man-hours of searching.

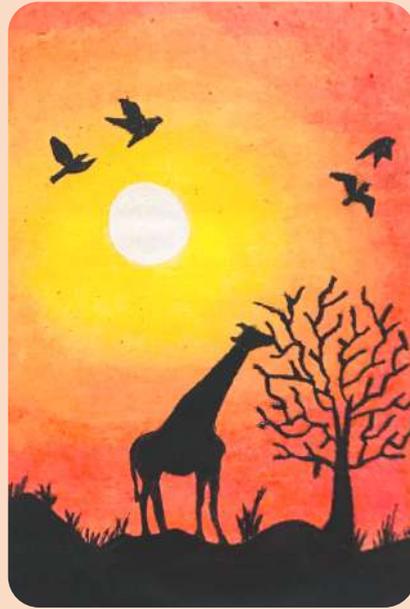
"Forensic botany has been there for a long time," says Dr. Spencer, "but it has always been and will continue to be a relatively rare component - yet it is neglected."

Art Gallery



**THE TRUE BEAUTY IN A
WOMAN IS REFLECTED IN
HER SOUL**

Anshika Singh
1st Year



FORAGING AT DUSK

Jyoti Singh
IIIrd Year



A PATH FULL OF THORNS

Kannupriya
IIIrd Year



**NEVER DIE WITH DREAMS,
DIE WITH MEMORIES**

Kannupriya
IIIrd Year



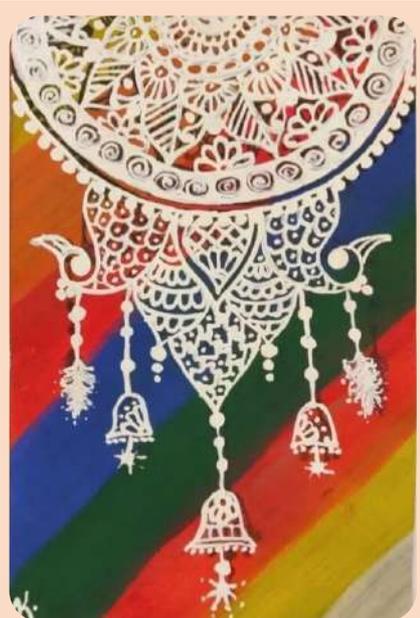
**EVERY FLOWER BLOOMS IN
IT'S OWN TIME**

Kannupriya
IIIrd Year



**A QUEEN TURNS PAIN INTO
POWER**

Kannupriya
IIIrd Year



नया दिन नयी शुरुआत

Kannupriya
IIIrd Year



THERE'S ALWAYS A HIDDEN OWL IN 'KNOWLEDGE'

Kannupriya
IIIrd Year



THE RITUALS

Jyoti Singh
IIIrd Year



BLUE BETTA FISH

Jyoti Singh
IIIrd Year



HAPPINESS IS OUR CHOICE

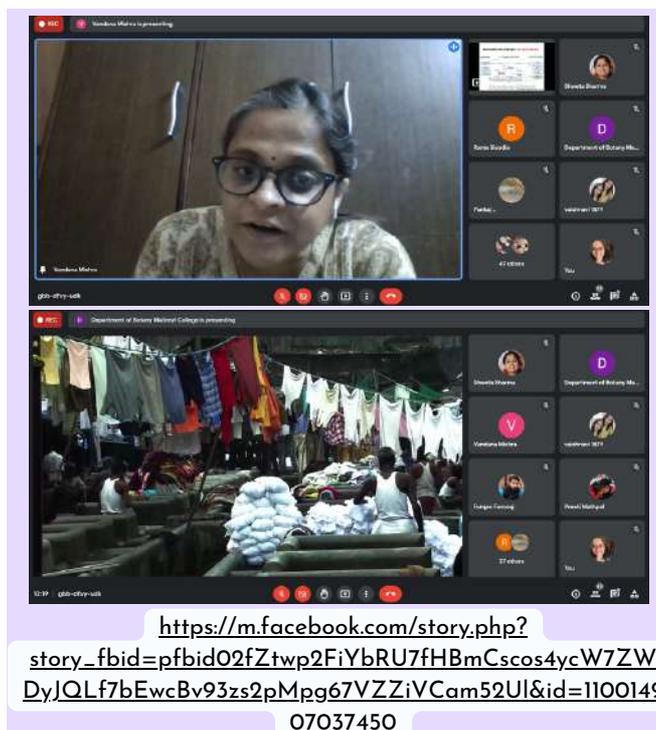
Kannupriya
IIIrd Year

Webinars & Workshops

WORKSHOP ON HIDDEN CHALLENGES OF FAST FASHION AND NATURE-BASED SOLUTIONS FOR ENVIRONMENTAL JUSTICE

17 July 2021

The Botanical Society of Maitreyi College organized a one day workshop for undergraduate students on “Hidden Challenges of Fast Fashion and Nature-Based Solutions for Environmental Justice” on 17 July 2021 on the platform Google Meet. The workshop commenced with a virtual lamp lighting ceremony for invoking Mother Saraswati along with a welcome speech by Dr. Shweta Sharma who also introduced the honorable speaker of the day Prof. Vandana Mishra, Professor, Department of Environmental Studies, University of Delhi. After that, Prof. Vandana delivered a lecture on the topic, highlighting the rapid increase in fast fashion and environmental concerns related to it. She also mentioned the mitigation measures at different levels at the end of her lecture. It was followed by the second part of the workshop, which was a video session. Five video screening sessions of specific case studies were conducted. Each video session was followed by a questionnaire round and a discussion round. Participation in the questionnaire round was mandatory. Students participated with great fervor and enthusiasm in the video session round. In the end, esteemed speaker Prof. Vandana Mishra



concluded the video session by giving concluding remarks, followed by a vote of thanks by Dr. Shweta Sharma. The workshop witnessed the active participation of over 52 undergraduate students from different colleges.

WEBINAR ON IMMUNITY AND NATURAL IMMUNITY BOOSTER: A SCIENTIFIC OVERVIEW

31 August 2021

BLOSSOM, the botanical society of the Botany Department, organized a webinar on 31st August 2021 via Zoom meet from 11 AM to 1 P.M. The topic of the webinar was IMMUNITY AND NATURAL IMMUNITY BOOSTER- A SCIENTIFIC OVERVIEW. The speaker of the event was Dr. D.U. Bawankule, PhD (Pharmacology), Principal scientist of CSIR-CIAMP, Lucknow – 15. He has completed 3 research papers and written 18 articles and 5 book chapters. The convener of the event was Dr. P. Kavita under the teacher in charge, Dr. Rama Sisodia. A total of 140 participants took part in the event.

The event was started with the lighting of the lamp and a welcome note from convener Dr P. Kavita. The respected speaker started the talk with glimpses of common introduction terms in immunology, how cells and molecules present in our body enhance our immune system, and also discussed the types of immunity and their role in the pandemic time of COVID-19. They also enlighten the traditional vaccines and upcoming future vaccines i.e. DNA vaccines and recombinant vector vaccines.

Further, they discussed the natural ways to boost the immune system i.e healthy lifestyle, regular exercise, a balanced diet and many more ways. In addition, they discussed the role of endorphins as natural immunity boosters, and stress management strategies to boost our confidence and immunity. Towards the end, they emphasized the importance of herbs described in ayurvedic literature which helps to boost immunity like ashwagandha, tulsi, amla etc.

At last, the question-answer session was held where participants enthusiastically asked their questions to the speaker which were very beautifully answered by Dr Bawankule and Dr Anirban pal. Dr P. Kavita gave a formal vote of gratitude to bring the session to a close.

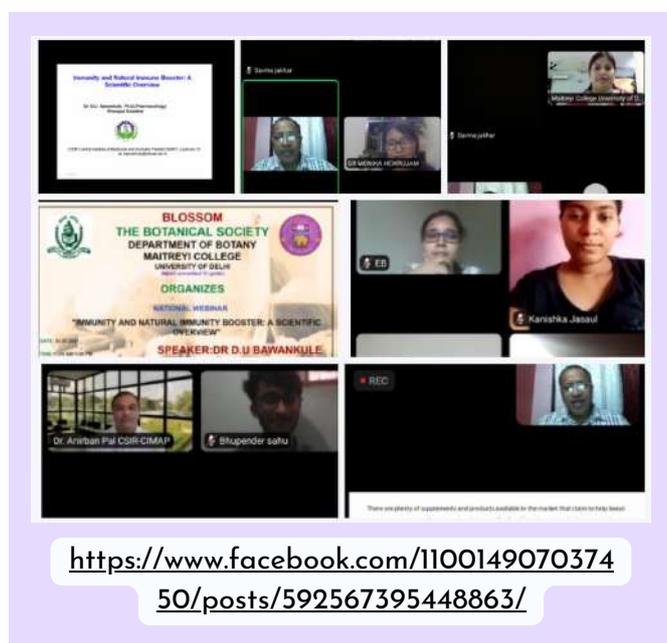
WEBINAR ON PERSONALITY DEVELOPMENT

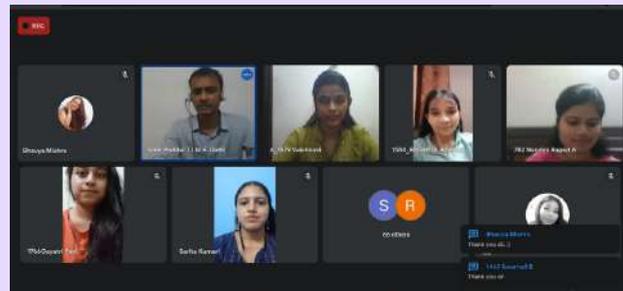
04 September 2021

Blossom, the botanical society organized a webinar on “Personality Development” on 4 September 2021 between 5 pm-6 pm via google meet. The guest speaker was Mr. Amit Poddar, Senior Regional Head of the Time educational group. The convener of the event was Dr. Sarita Kumari and the patron of the event was our respected principal ma'am, Dr. Haritma Chopra. More than a hundred people registered and many participants attended the webinar. The webinar started with a lamp lighting ceremony and the guest speaker was introduced by Dr. Sarita Kumari.

During the webinar, our guest speaker taught the participants how to develop their personality by covering all the common questions one has while thinking about developing the personality including the topics like - what is personality? How to develop a personality?. He highlighted the importance of overall development and enhancing of soft skills. The speaker taught all the participants the areas they can work on and all the steps that need to be followed to achieve a good personality. All the participants showed their active participation with their endless questions in the question and answer session on personality development which were very well addressed by our speaker.

The vote of thanks was given by Dr. Shweta Sharma. Feedback was obtained from the participants by google form and e-certificates were provided.





<https://www.facebook.com/110014907037450/posts/pfbid027uXbxAPN1WotHJACswhuvJoZDwqLZL1yzvTMn63KM8YxLZ69QgrMFsJ78FCzH5F4/>

WEBINAR ON HOW TO READ SCIENTIFIC LITERATURE? AND AN INTRODUCTION TO MANAV- THE HUMAN ATLAS INITIATIVE

11 September 2021

BLOSSOM, The Botanical Society of Maitreyi College organized a webinar for undergraduate students of Maitreyi College on "How to read Scientific Literature and Introduction to MANAV- The Human Atlas Initiative" on September 11, 2021 on zoom platform. The webinar was started by our student volunteer Nandini Rajput with a welcome speech by Dr. Sarita Kumari who also introduced the honourable speaker of the day Dr. Anupama Harshal W. Consultant Science communication and Public Engagement MANAV- The Human Atlas Initiative IISER, Pune. After this, Dr. Anupama held a presentation focusing on how and where to surf the quality scientific literature and structuring of a research paper. She also mentioned creation of Human atlas by assimilating all available macro- and micro-level information from scientific literature and public databases. For making the talk fun and indulging she popped random questions as audience poll for the participants. Towards the end of the talk, she concluded by telling the participants about a two-step test:- English proficiency test and The Post-webinar Questionnaire for which the link was provided on the email-id of the

participants. The webinar was concluded by our student volunteer Vaishnavi followed by the vote of thanks presented by Dr. Monika Heikrujam. Students attended the webinar with a great zeal and ardour. The webinar witnessed the active participation from 63 undergraduate students.



<https://www.facebook.com/110014907037450/posts/658561725516096/>

WEBINAR ON INTELLECTUAL PROPERTY RIGHTS AWARENESS PROGRAMME (UNDER NATIONAL IP AWARENESS MISSION NIPAM)

04 February 2022

On the afternoon of 4th February 2022, BLOSSOM: The Botanical Society of Maitreyi College organized a webinar on Intellectual Property Rights Awareness Programme (Under National IP Awareness Mission NIPAM). The webinar began with an introductory note delivered by Dr Sarita Kumari, who also introduced the speaker of the day, Ms Nekita Kumari, an examiner of patents and designs CGPDTM, DPIIT followed by virtual lamp lighting. Ms Nekita explained what are legal rights and how they protect various creations and inventions resulting from intellectual activity in the industrial, scientific, literary or artistic fields. She also threw light on types of IPRs i.e. patents, copyright, industrial design, trademarks, plant variety rights, trade dress, geographical indications, and trade secrets. Through her presentation, she highlighted an important topic- SICLD (semiconductor integrated circuit layout- design). A variety of examples, pictures and flowcharts were used for a better understanding of the topics. The webinar was conducted on the Zoom platform and witnessed the active participation of 132 students from different colleges. At the end of the session questions of students were addressed by the speaker. A vote of thanks was presented by Dr Monika Heikrujam.

Intellectual Property India
MINISTRY OF COMMERCE & INDUSTRY
DEPARTMENT OF PROMOTION OF INDUSTRY AND INTERNAL TRADE
OFFICE OF THE CONTROLLER GENERAL OF PATENTS, DESIGNS AND TRADE MARKS

Government of India
Ministry of Commerce & Industry
Department of Promotion of Industry and Internal Trade
Office of the Controller General of Patents, Designs and Trade Marks

NIPAM
NATIONAL IP AWARENESS MISSION

Blossom: The Botanical Society
Department of Botany
Maitreyi College, University of Delhi
Organizes

INTELLECTUAL PROPERTY RIGHTS AWARENESS PROGRAMME
(Under National IP Awareness Mission NIPAM)

SPEAKER
Ms Nekita
Examiner of Patents and Designs
D/o, CGPDTM, DPIIT

75
Azadi Ka
Amrit Mahotsav

Date: 04 Feb 2022
Time: 4:00 - 5:00 P.M.

Registration Link: <https://forms.gle/rKGT8187Gf5XAzvCP9>
Zoom Meeting Link: <https://us05web.zoom.us/j/88115470304?pwd=RGU1ZjR2SjVlUjM0eE3RDlN0X0VlZ0c0>

Dr. Rama Sisodia
Teacher-in-charge
Department of Botany

Dr. Serita Kumari & Dr. Monika Heikrujam
Event Coordinators

Prof. Harita Chopra
(Officiating Principal)
Patron

- Registration is mandatory
- E-certificates will be issued by the office of CGPDTM, Govt. of India, after filling up the feedback form

NATIONAL CONFERENCE ON "REALMS OF PLANT DIVERSITY: EXPLORATIONS WITH NOVEL PERSPECTIVES"

BLOSSOM, the Botanical Society of Maitreyi College organized a One-day National conference on "Realms of Plant Diversity: Explorations with Novel Perspective" on 24 August 2021 on the zoom and google meet platform. It was convened by Ms. Divya Singh, Dr. Sandeepa Singh, and Dr. Pooja Baweja. Prof. P.L. Uniyal (Department of Botany, University of Delhi) and as distinguished speakers, Dr. Felix Bast (Department of Botany, Central University of Punjab) was invited. At 9:30 a.m., Dr. Sandeepa Singh gave the inaugural address, which formally opened the Conference. At the end of her warm welcome note. Prof. Haritima Chopra, Principal of Maitreyi College, further gave a hearty and cheerful welcome address speech. There were 3 technical sessions along with a valedictory session in the end.

Technical session 1 was introduced by Dr. Sandeepa Singh with the felicitation of the speaker. In his introductory address, Professor Felix Bast gave a brief overview of his topic- "It is childlike curiosity, not mad pursuit after Impact factors that lead to inspiring discoveries". He presented the need to foster blue-skies research and discussed the clue to survival strategies of extremophiles. He acknowledged India's discovery of new plant species in Antarctica, the Science continent, and how in particular it offers exciting avenues of research like Astronomical observation, meteorite hunting, and many more.

Technical session 2 was commenced by Dr. Pooja Baweja and felicitated the speaker. The discussion was introduced by a brief presentation on the topic "Podostemaceae: Ecological and evolutionary enigmas" by Prof. P.L. Uniyal. It focused upon its objectives, priority areas of work, and the challenges and opportunities. The discussion was further enriched by researchers and students in a question-answer round. In summing up the conclusions of session 2, Professor P.L. Uniyal put the light on aquatic angiosperms and highlighted the significant progress increasingly being achieved in that direction.

Technical session 3 was conducted in two parts that ran simultaneously on the google meet. The technical session 3A was moderated by Dr. Eapsa which had oral presentations by 12 teams of researchers, students, and their mentors on various topics. Technical session 3B, moderated by Dr. Monika, had oral presentations by 10 teams of researchers, students, and their mentors. The session came closer to the end with the announcement of winners. Judges for 3A were Dr. Atika Chandra (Department of Botany, Maitreyi College) and Dr. Shukla Saluja (Department of Botany, Sri Venkateswara College). Judges for the 3B session were Dr. Monika Koul (Department of Botany, Hansraj College) and Dr. Sarita Kumari (Department of Botany, Maitreyi College). From session 3A, oral presentation by Jyoti Singh, Mansi, Neha, Isha Arya, Dr. Pooja Baweja, and Dr. Priyadarshini Singh with the topic, "Analysis of land use land cover changes in Jhajjar district, Haryana towards sustainable agriculture" secured the first position and Oral presentation by Richa Jain, Aparajita Mohanty and Dr. Reema Mishra with the topic, "In silico analysis of alpha/beta hydrolase gene family of *Oryza sativa*" secured the second position. From session 3 B, oral presentation by Sandeepa Singh, Priyanka Rhel, Sweety Meena, Neha Chillar with the topic, "Effect of global climate change on aquatic life" secured the first position and oral presentation by Dr. Renu Soni, Bisma Butool and Akshita Sharma on the topic, "Importance of plant-based kitchen ingredients during COVID-19" secured the second position.

The conference successfully concluded with an overwhelming response from everyone and with fruitful outcomes and enlightenment about the topic. Ms. Divya Singh thanked everyone present and all those who had contributed to the success of the Conference.

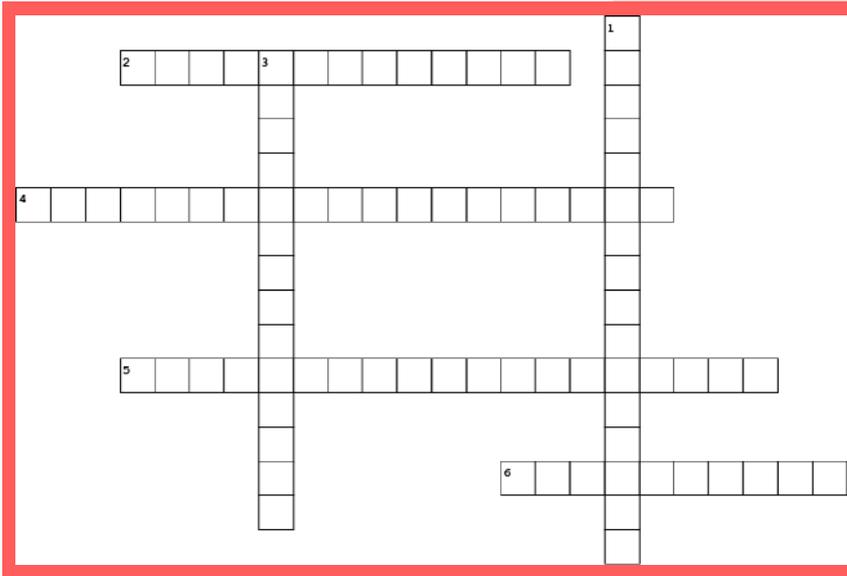


https://m.facebook.com/story.php?story_fbid=pfbidOYFBMZ4zMYd8qPptVVWfNKCLnu3ZGSLAKTSDkL1H9URPMW3c2xdSjLFLfbyoUpRe3l&id=110014907037450

TEST YOUR KNOWLEDGE



CROSSWORDS ON NOBLE LAUREATES



ACROSS

2. He discovered that radiation causes mutation and became a leading voice against nuclear weapons.
4. These scientists discovered that DNA is shaped like a double helix.
5. The founders of quantum mechanics.
6. The first person who won two noble prizes in two different fields.

DOWN

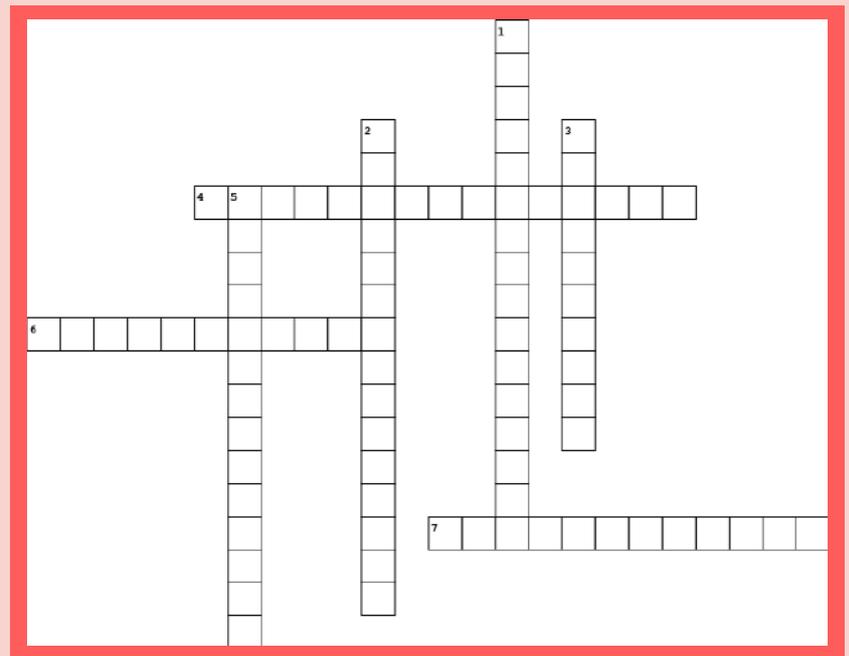
1. He discovered the most used antibiotic penicillin accidentally.
3. The most influential physicist who laid the foundation for modern science with his one of the most famous discoveries of photoelectric effect.

ACROSS

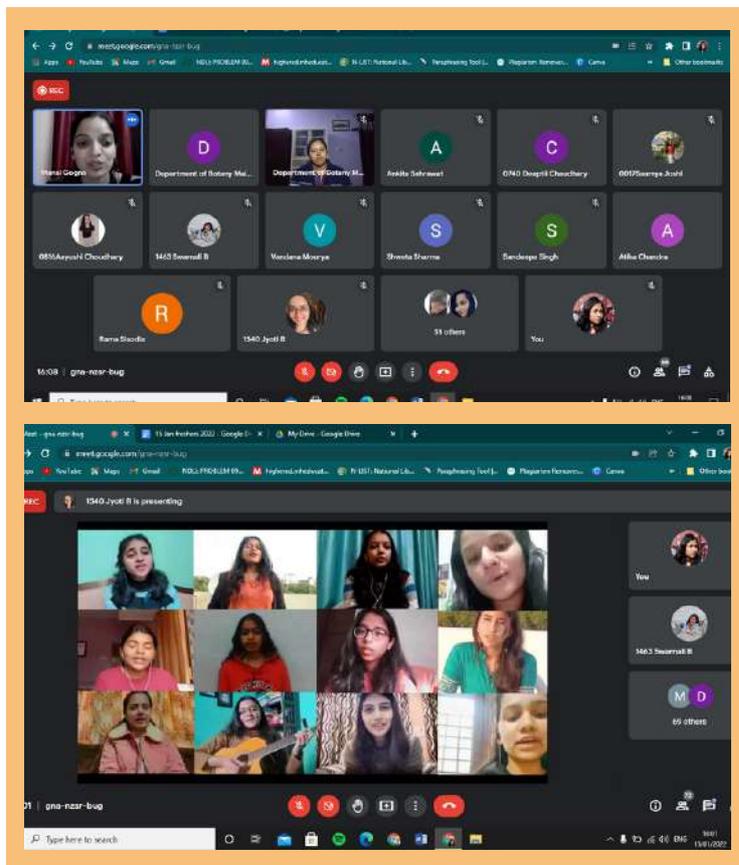
4. He determined the amino acid sequence of a protein.
6. We can listen to the radio, watch television, talk by mobile phone or surf the Internet using computers thanks to these scientists.
7. The only person twice decorated with a Nobel Prize not shared with anyone else.

DOWN

1. He laid the groundwork for mutational study with white-eyed *Drosophila*.
2. The discoverer of different blood types.
3. A military medical officer who discovered the malaria treatment.
5. Discoverer of in-vitro fertilization.



FRESHERS' 2021-22



Miss Freshers 2021:
Saumya Joshi



Miss Freshers 2021
(runner up):
Deepti Chaudhary

Freshers' Party 2022 was organised by Blossom, the Botanical Society of Maitreyi College, DU. It celebrated the embarking on a new journey of students from school into college life. It was held in virtual mode at the Google Meet on 15 January 2022.

The event commenced at 3:00 pm with the ceremony of lamp lighting. Dr Mansi Gogna gave a hearty and cheerful welcome address speech. The event was proficiently planned out by Swarnali Panda, a 3rd-year Botany Hons student.

The ceremony proceeded with a short and beautiful poem for welcoming freshers by Savina, a 2nd-year student of Botany Hons. TIC Dr Rama Sisodia wholeheartedly welcomed each and everyone present in the virtual event with her warm words of advice and blessings to the newcomers. An enthralling dance per-

formance compilation video by 2nd-year students was presented. The event was followed by motivating and inspiring words from the respected professors of the department.

Society tried its best to make the virtual event vigorous and engaging through conducting various events such as the Quiz round that was held on 8th January 2022 and the Talent hunt round that took place on 8th-9th January. A video compilation of the talent hunt round for Miss Freshers 2022 was then displayed.

Next in the queue, a Ramp walk round of Miss Freshers took place which amused and stunned the audience with the vibrant performances. A group song by 3rd-year students was presented which engrossed everyone's interest. The honourable judges of the event were Dr Ankita Sehrawat and Dr Monika

Heikrujam. The difficult decision to choose among the incredibly talented freshers came to an end as the results were finally announced by the judges. Miss Fresher 2022 was Saumya Joshi and the runner-up was Deepti Chaudhary. The judges and everyone present in the audience congratulated them and they shared their experiences.

Dr Mansi Gogna expressed her heartfelt gratitude and appreciated everyone who made the event a success and turned it into a memorable one on her ending note of the ceremony.

ELECTIONS 2021-22

BLOSSOM, The Botanical Society conducted the student's union election for the session 2021-22 from 21 Jan to 26 Jan 2022. A flyer of elections was circulated among the students of all three years through WhatsApp groups, informing them about elections followed by a Google form through which candidates gave their names for various positions of President, Vice President, Treasurer, Secretary and Office bearers. For the first four positions students of III and II year were eligible whereas office bearers were elected from I year only.

A span of two days was given for students to give their names for positions. Students performed with great zeal and came forward to give their names. Voting was held through Google Form on 24 Jan 2022. Voting form was kept open for one day. After counting of votes, a fair decision was taken for one and for all and results were declared on 26 Jan 2022. Jyoti Singh from III year got selected as President, Nandini Rajput from II year as Vice President, Ananya Sharma from II year as Treasurer and Gargi Singh from II year as Secretary. Archana Kumari, Manu Gahlot, Jiya Dua and Sneha Gupta from I year got selected as Office bearers.



JYOTI SINGH
PRESIDENT



NANDINI RAJPUT
VICE PRESIDENT



ANANYA SHARMA
TREASURER



GARGI SINGH
SECRETARY



ARCHANA KUMARI
OFFICE BEARER



MANU GAHLOT
OFFICE BEARER



JIYA DUA
OFFICE BEARER



SNEHA GUPTA
OFFICE BEARER

VISIT TO NATIONAL INSTITUTE OF IMMUNOLOGY (NII)



NATIONAL SCIENCE DAY (28 FEB 2022)

Five students, Swarnali, Jyoti, (Botany Hons. 3rd year) Purva, Pallavi (Zoology Hons. 3rd year) and Vaishnavi (Botany Hons. 2nd year) accompanied by teacher coordinator Dr. A. Vineetha attended a one day conference at the National Institute of Immunology, New Delhi under the Science Setu program collaboration between Maitreyi College, University of Delhi and National Institute of Immunology. We had the opportunity to look into the research work of different PhD students through their posters and presentations related to various fields of Immunology. This was a great experience for us as undergraduate students since we got to understand how to work in the future and how to choose our field further. The event served as a window of opportunity for students as they got to interact with various research scholars and interns. Through interactions, students got the chance to clear various doubts regarding the field of research, the scope of research in immunology, research in NII etc.

ALUMINI INTERACTION

Blossom, the botanical society of Maitreyi College organized an alumni interaction session on Wednesday 15 September 2021 from 4-5 pm via google meet. The alumni speaker was Ms. Mary Eliza from the Grantham Scholar University of Sheffield, UK. The teacher in charge of the session was Dr Rama Sisodia along with the anchor of the interaction was Ms. Ambika and Ms. Bhavya. Dr Atika started the interaction with the introduction of Ms. Mary Eliza. She was a student of B.Sc. Honours Botany, Maitreyi college batch 2012-15 and did her masters in environmental Studies from Teri SAS. She started by explaining her journey abroad. Then she emphasized an interdisciplinary approach towards studies. After her M.Sc. She was engaged in a project of MGNREGA where she interacted with small-scale farmers and explored more about their way of farming to earn their livelihood. She completed her post-graduation diploma from Venkateswara college in Molecular technology and now as a PhD scholar, her field of research is based on utilizing the soil microbiome for sustainable development in agriculture, drawing from

rhizobial inoculation and farmers' knowledge. She is working on rhizobia virus interaction and how to increase the effectiveness of the rhizobial function. She also focused on the importance of the practical part in studies.

She beautifully explained how to choose an ideal college and how to cope with stress. She focused on choosing an interdisciplinary approach while selecting the research area and also looking up internships and courses simultaneously. She advised us to look upon different projects for international student funding, the language exam like TOEFL AND IELTS and how to write a good application for approval, etc. The session ended with an interactive question-answer session. Dr Eapsa berry gave a formal vote of gratitude to bring the session to a close.



MS. MARY ELIZA

Ph.D student, Grantham Scholar, University of Sheffield, United Kingdom (2019 onwards)

<https://www.facebook.com/110014907037450/posts/658585528847049/>

PALLAV' 22

ANNUAL DEPARTMENTAL FEST



Next Gen' Decor: Kulhad Painting Competition



Reelistic: Reel Making Competition

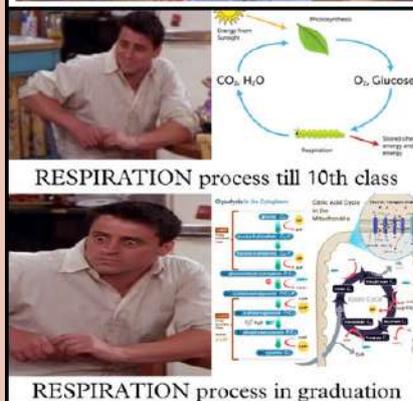


Craft N' Creations: Newspaper Outfit Making Competition

Blossom, the Botanical Society of Maitreyi College, organised the departmental annual fest 'Pallav' from 3rd to 13th April 2022. It was held in virtual mode and many students participated in it. The convenor of the event was Dr. Rama Sisodia. There were total 5 events which are 'Rangavalli: Rangoli making competition on the theme- Prakriti', 'Memerz: Meme making competition', 'Craft N' Creations: Newspaper outfit-making competition', 'Next Gen. Decor: Kulhad painting competition on a floral theme' and 'Reelistic: Reel making competition'.

Entries and registration were received through Google form and over 60 registrations were received from various colleges. Separate Whatsapp groups were created for easy contact with participants and rules of the competitions were told through circulated posters. Later results were declared on the official Instagram page of blossom society- @blossommaitreyi. Following students were the winners, for: 'Memerz': 1st- Kumari Babli from Deen Dayal Upadhyay College, 2nd- Akanksha from Maitreyi College, 3rd- Abhyarthana Jena from Maitreyi College, 'Craft N' Creations': Neha Chhillar from Maitreyi College, 'Next Gen' Decor': 1st- Tie between Deepti and Mehak Verma of Maitreyi College, 2nd- Akanksha form Maitreyi College, 3rd- Kirtika Singh Tanwar from Maitreyi College and 'Reelistic': Tanya from Maitreyi College.

When you are wondering why you have no money, no chill, so much tension and you are depressed too then someone says "it's because you chose science after 10th"



Memerz: Meme Making Competition

BON VOYAGE

FARWELL OF BATCH 2019-2022

After a long pandemic, an offline farewell ceremony was arranged for outgoing final-year students of the Botany Department on 25 April 2022 by first and second-year students of the department. It was attended by all our respected teachers of the botany department. All the efforts of the students and their enthusiasm for their seniors made it such a great event. To make the event entertaining, the students prepared the musical performance where they played the guitar and sang the songs for their seniors. The whole batch of 2019 cut the cake to celebrate the sweetness of their college life which has been full of loving memories. Everyone interacted

and shared their experiences and fun moments in college and also expressed their deep love and gratitude to the teachers of the botany department for their selfless teaching and guidance. Then all the teachers of the botany department wished the students welfare and a better and prosperous future. There were many engaging and joyful games like passing the parcel, guessing the Bollywood dialogue, dancing on folded paper etc. specially designed for seniors. They all showed immense interest and participated enthusiastically in all the activities dipped in fun and laughter. After games, senior students were felicitated with various titles that defined their

personalities. Seniors received their titles by showcasing their ramp walk skills which threw fun and added more life to the party. Afterwards, with unbiased voting, Miss Farewell's title was given to Jyoti Singh and Runner Up was Ankita. The event ended beautifully with all the seniors dancing their hearts out and cheering up the new life. It had been a successful function with feelings of happiness intermingled with some tears rejoicing at college life. All kudos to the great efforts of 1st and 2nd-year students who put the event together and made it memorable for the Seniors.

BEST OF LUCK FOR THE JOURNEY AHEAD!



REFLECTIONS

Messages of Alumna



Mary Eliza

Ph.D student, Grantham Scholar, University of Sheffield, United Kingdom (2019 onwards)

My love for Biology started when I was at School. I was really intrigued by plants, trees and flowers. This led me to study Botany and obtain a Bachelor degree from Maitreyi College (2012-2015). The professors there were amazing and I learnt a variety of different things about plants- from Taxonomy, Biodiversity to Physiology and Genetics. Yet, I did not just grow academically but in other spheres of my life as well.

I was part of the music team where I did what I really liked- singing! Besides, Blossom, our department's Botany society - was a collective initiative by us to organize extra-curricular activities in the department. After completing my Bachelors, I completed a Master degree in Environmental Studies. The main reason for pursuing a Masters in this area was because I wanted to work and 'earn' after my studies. I thought that a Masters in Botany or any other Life Sciences would most likely narrow down my career option to just academics and I wanted more than that.

My Masters degree was structured in the same way as a Social Studies degree rather than a Natural/Life Science degree. This attracted me to it and I thought I would enjoy this subject matter. However during one of the lectures in Masters I realized that I really missed studying Botany and undertaking wet lab activities including designing and running my own experiments. This was missing from my Masters curriculum. It was at this moment that I realized that I want to pursue a career in research and academics.

Yet, there were many things which I learnt in my Masters which I could not have learned elsewhere. For instance, in my Master thesis I got an opportunity to interview farmers in India about their livelihoods and experiences. This was an eye-opener. Especially the information I learnt about the plight of farmers - mainly the small-scale ones. This was a really important experience as I always dreamt of working with farmers as a child and I remember being so excited to watch agriculture news on national TV.





After all of these experiences, I dreamt of pursuing a PhD where I could combine everything that I had learnt so far. It was not so long before I understood that this would not be easy. I started looking for PhD positions in the field of Biology (specifically interdisciplinary projects which combined Botany and Environmental studies) but all in vain. Sometimes, I wasn't considered because I was not specialized enough and 'was a Jack of all trade but master of none'. Other times, I was told that they had chosen a better candidate. After all these rejections, I pursued a one-year Postgraduate diploma in Biotechnology to make my resume stronger and to have some hands-on experience in wet lab. This course focused on hands-on-training in wet lab and focused on subjects like Biotechnology in which I was really interested.

The diploma in Biotechnology gave me the self-confidence to apply for interdisciplinary PhD projects in Europe (which was my dream continent to do a PhD).



Then after about two years of PhD hunting and after my Master degree I finally came across a PhD position which focused on sustainable food production and combined the fields of Microbiology, Botany and Social Studies which involved working with farmers. I was really excited about this and thought that this is the ideal PhD that I wanted to pursue.

I have been studying in the UK for the past two years, pursuing a PhD at the University of Sheffield, as a Grantham Scholar. I work on improving rhizobial inoculants using viruses.

In addition, my research also involves interviewing farmers and urban growers about their perceptions about soil inoculants and future soil micro biome technologies. My greatest lesson from the whole experience was that never give up on your dreams and try to find ways which bring you closer to realizing them.

In the end, a fun fact - Krebs cycle/TCA cycle/Citric acid cycle was identified by Hans Adolf Krebs and William Arthur Johnson in 1937 at the University of Sheffield. In the memory of this discovery, we have THE KREBS CAFÉ in the University!



Nikita Goel

Pursuing a master's in biology from TIFR, Mumbai

I, Nikita Goel, am currently pursuing a master's in biology from TIFR, Mumbai. I did my bachelor's in Botany, batch 2018-21. I would like to share my experience at Maitreyi.

To sum up my journey at Maitreyi on a piece of paper would be a miracle. It was enriched with a platitude of experiences that every time I am reflecting upon it I come up with something new and different.

Academically I would say that the coursework of Delhi University is well structured. It built my base for my higher studies and a lot for entrance exam preparation. As far as teaching is concerned the materials and guidance provided by our able faculties at Maitreyi are excellent. In my entire three years, I have never found any topic for which I had to hunt libraries or e-resources for. The references and books recommended by my teachers were at par and reading them helped me build on basic concepts. I would like to mention here that I took no coaching for my entrances.

I highly recommend everyone to read books rather than relying on websites that provide very condensed materials. The classroom teaching of our department at Maitreyi is elaborate; I am able to appreciate this fact only after joining higher studies.

My journey at Maitreyi is far more beautiful because of the exposure it has provided me. Through the able guidance of mentors and our faculty's encouragement, I was fortunate enough for a really rich co-curricular experience at Maitreyi. From the first semester, we were encouraged to take part in departmental activities, quizzes, extempore, paper presentation, and conferences. I felt lost at the start but once I got a hang of them, they were the most exciting things in the scientific community where researchers and young scientists from different Institutes across India and the world used to gather and discuss science. They also helped me to know places out there where I could go, intern, or do higher studies.

Apart from these, I had training in institutes in collaboration with Maitreyi. I always had good communication with my professors and was highly encouraged by them because teachers at Maitreyi are also involved in various things like having societies, and coordinating conferences; they have so many links which ultimately used to help us, students. I have always been encouraged by my teachers to discuss and ask for help, professional or personal. It is always nice to discuss things with a diverse set of people as it broadens your knowledge or if they didn't know it they always guided me in the right direction and provided the right perspective to think through it.

I have learned from here to never hesitate to bring your doubts and concerns to the faculty for guidance. Maitreyi has also taught me the way we should conduct ourselves in a professional academic setup. From my naivety, I have grown a lot in these three years.

I want to sum up by saying Maitreyi and Science and especially the Botany department have provided me wings to be able to fly as high as I wish to, for which I will always be grateful.

CROSSWORD KEY

TOP PUZZLE

1. *Alexander Fleming*
2. *Hermann Muller*
3. *Albert Einstein*
4. *Watson, Crick & Wilkins*
5. *Niels Bohr and Max Planck*
6. *Marie Curie*

BOTTOM PUZZLE

1. *Thomas Hunt Morgan*
2. *Karl Landsteiner*
3. *Ronald Ross*
4. *Frederick Sanger*
5. *Robert G. Edwards*
6. *John Bardeen*
7. *Linus Pauling*

FUN FACTS

Omphalotus japonicus, also known as the Moon Night Mushrooms, have the MoonShroom magic of illuminating the darkness by their bioluminescent fruiting bodies.

<https://le-noir-rabbit.tumblr.com/post/113625942048/light-of-the-fungi-by-nekogigi-on-flickr>



Ginkgo biloba is the only living fossil with artistic fan-shaped leaves that develop into a stunning yellow during the fall. This tree with a bit of history has the earliest leaf fossils dating from 290 million years ago. It can withstand many urban conditions including heat, air pollution, salt concentration, and confined spaces.

<https://www.feednavigator.com/Article/2019/02/01/Fermented-Ginkgo-biloba-leaves-could-boost-growth-performance-of-broilers>

Paper Birch Tree (*Betula papyrifera*) has a papery thin bark that used to be a blessing to many to write on it as a way to send messages. It favored as a resource for sleek, sturdy, and lightweight watercraft.

https://s3.amazonaws.com/eit-planttoolbox-prod/media/images/Betula_papyrifera_In_ZIMue1lrjNa.jpg



Juice extract of the Bluebell flower (*Hyacinthoides non-scripta*) was used to prepare glue in historic times.

Flora blesses humans with a therapeutic effect on hypertension. The closer we live to green space the lesser the stress.



Tree rings give us a lovely present of a glimpse at our past and the weather that affects us. Apart from telling the age of a tree, they provide us with information about the area's climate condition in the past. Tree rings are wide in a warm climate and thinner in cold and dry.

One light ring + one dark ring = 1 year of a tree's life

Fungus, *Aspergillus tubingensis*, as found by microbiologists can degrade polyurethane.

<https://amb-express.springeropen.com/track/pdf/10.1186/s13568-017-0428-8.pdf>



India discovered a new plant species, *Bryum bharatiensis*, surviving under thick snow with no sunlight and temperatures going down to -76 degrees celsius.

<https://d2xsikgwxxxyoe.cloudfront.net/media/50406/new-plant-species-in-antarctica.jpg>

The tallest living plants on the planet are Coastal redwoods or *Sequoia sempervirens* that reach up to 379 feet (115 meters)



Peanuts are not nuts but are actually in relation to beans and lentils.

Cranberries have small air pockets which provide buoyancy and help to float on water.



The Shameplant (*Mimosa pudica*) curls its leaves inwards and droops when touched, reopening after a few minutes. This is used as a defending mechanism from harm by the plant.

ACHIEVEMENTS

Here are the glimpses of the stars of our department who spread their sparkle in various Inter and Intra College competitions during the session of 2021-22



Ritika

Student of Batch 2018-21
Secured Grand CGPA of 9.635

ARTWORKS



BY: JEENA THINGUJAM, IIIIRD YEAR
 POSTER MAKING COMPETITION ORGANIZED BY ECO CLUB- PRAKRITI OF MAITREYI COLLEGE
 THEME: "SAVE OZONE, SAVE LIFE"
 POSITION: IIInd
 EMAIL ID: thjeenamaisies@gmail.com



BY: JYOTI SINGH, IIIrd year
 POSTER MAKING COMPETITION ORGANIZED BY ECO CLUB- PRAKRITI OF MAITREYI COLLEGE
 THEME: "NO TO ONE TIME PLASTIC USAGE"
 POSITION: ISt
 EMAIL ID: 1540jyotib@gmail.com



OTHER COMPETITIONS

GEETANSHI DANG, IIND YEAR

COMPETITION NAME: Quiz Competition organized by Environmental Information System (ENVIS)- Resource Partner, CSIR-National Botanical Research Institute (NBRI), and CSIR Jigyasa, Lucknow

POSITION: IIIrd

DATE OF COMPETITION: World Ozone Day (16 September, 2021)

MODE OF COMPETITION: Kahoot

GEETANSHI DANG, IIND YEAR

COMPETITION NAME: "Relay the gray" – An intercollege wildlife awareness competition organized by Department of Zoology, Deshbandhu College, University of Delhi

POSITION: IIInd

DATE OF COMPETITION: 8th October, 2021 (Wildlife week celebration: WILD-O-VIGUS)

MODE OF COMPETITION: Kahoot

VAISHNAVI, IIND YEAR

COMPETITION NAME: Inter college Quiz competition on "Save Earth Celebration" organized by Kirori Mal College

POSITION: IIIrd

DATE OF COMPETITION: 22 April 2021

MODE OF COMPETITION: Zoom

VAISHNAVI, IIND YEAR

COMPETITION NAME: Intra college live Quiz competition "QUIZOPHILA" under Azadi ka Amrit Mahotsav organized by Maitreyi College, University of Delhi

POSITION: IIIrd

MODE OF COMPETITION: Zoom

VAISHNAVI, IIND YEAR

COMPETITION NAME: Food Cop Bad Cop under Naturazzi '21 organized by Dayal Singh College

POSITION: Ist

DATE OF COMPETITION: 10 April 21

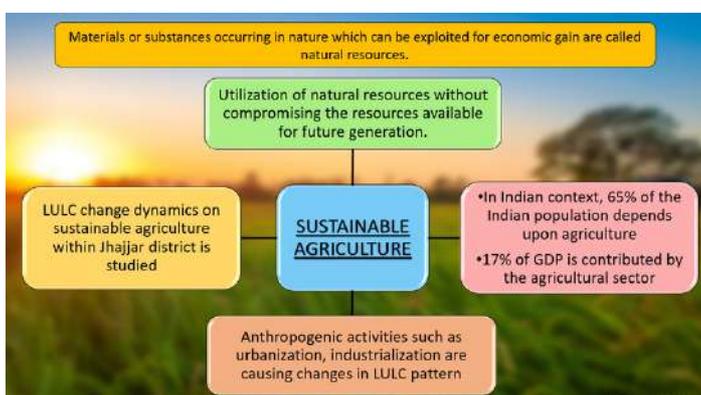
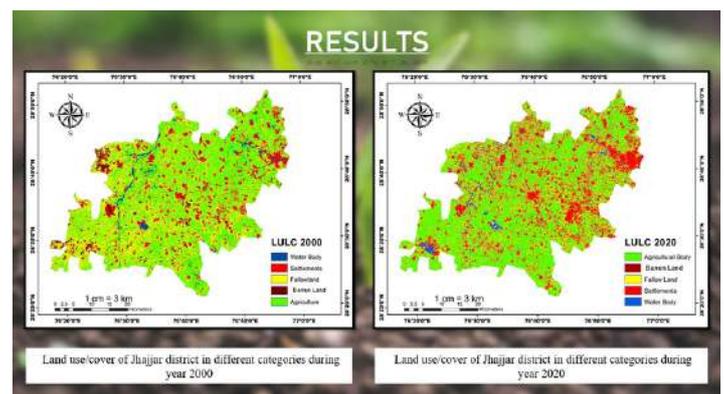
MODE OF COMPETITION: Google Meet

PAPER PRESENTATIONS



NAME OF PARTICIPANT(S): Neha, Mansi, Jyoti Singh, IIIrd Year
COMPETITION NAME: National Conference on "Realm of Plant Diversity: Exploration with Novel Perspective" organized by Blossom: The Botanical Society of Maitreyi College, University of Delhi
POSITION: 1st
MODE OF COMPETITION: Google Meet
DATE OF COMPETITION: 24 August 2021

NAME OF PARTICIPANT(S): Neha, Jyoti Singh, IIIrd Year
COMPETITION NAME: Paper presentation in International Conference on 'Recent Trends in Drug Discovery and Development' organized by Department of Chemistry under the aegis of IQAC, Maitreyi College, University of Delhi
POSITION: Best Paper Presentation
MODE OF COMPETITION: Google Meet
DATE OF COMPETITION: 8-9 October 2021



NAME OF PARTICIPANT(S): Neha, Mansi, Jyoti Singh, IIIrd Year
COMPETITION NAME: Paper Presentation in EQUINOX: The Annual International Conference on 'Sustainable Agriculture: Negotiating Tradition and Modernity' organized by Centre for Research, Maitreyi College, University of Delhi
POSITION: 1st
MODE OF COMPETITION: Zoom
DATE OF COMPETITION: 12-14 August, 2021

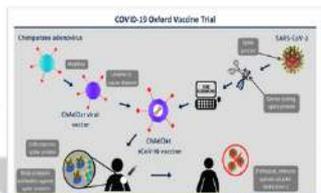
Patent for vector

• Sarah Gilbert (Professor of Vaccinology) and Adrian Hill (Professor of Human Genetics) from Oxford University developed Chimpanzee Adenovirus Oxford (ChAdOx) viral vector.

• They file the application PCT/GB2012/000467, for international patent on 25th May, 2012 and hold patent in some countries like:

- Europe- EP 2714916
- US- US9714435
- China- CN103930551
- India- IN318021

• The Oxford University use the same vector to produce Covid vaccine- ChAdOx1 nCoV-19, in February 2020.



NAME OF PARTICIPANT(S): Geetanshi Dang, IInd Year

COMPETITION NAME: Paper presentation in National webinar topic "Intellectual Property Rights: Issues and Challenges" on Extraordinary measures to keep the respect of IPR during pandemic organized by Department of Botany, Deen Dayal Upadhyaya College, University of Delhi

POSITION: Best paper presentation (oral)

MODE OF COMPETITION: Zoom

DATE OF COMPETITION: 24-25 September, 2021

NAME OF PARTICIPANT(S): Geetanshi Dang, IInd Year

COMPETITION NAME: Paper Presentation Competition on "AIDS: Prevention and Treatment" organized by Botanique – The Botanical Society, Hansraj College in collaboration with The Red Ribbon Clubs- Delhi State AIDS Control Society

POSITION: IIIrd

MODE OF COMPETITION: Microsoft Teams

DATE OF COMPETITION: 17 October 2021

RESULT AND CONCLUSION

These laws states:

- The patient have right to life, liberty and security as others.
- No person can be forced for testing and/or treatment or otherwise cruel treatment.
- HIV+ persons have the right to work (employed) and participate in the cultural life of the community.
- They have right for standard of living, assistance, medical care.
- States need to identify legal obstacles & form effective strategies.
- Emphasis on education and conciliation, speedy and effective remedies.
- Compulsory medical examination for detection of HIV/AIDS in case of prostitution.
- Court can give orders for revealing the medical status in case of risk of spreadness.
- If the disease can spread, the person can be boycott from the place by provision of a medical expert.
- Advocating hatred leads to imprisonment from three months to two years or a maximum fine of 1 lakh or both.



'These laws make the society aware and prevent patients from being hatred & discriminated, and also control the spreadness.'

POLYMERIC "SMART" NUTRIBOTS FOR SUSTAINABLE AQUAPONIC AGRICULTURE

Students - Shweta Tiwari , Swarnali Panda , Charu Gupta , Shivangi Saini , Divya Bisht , Rupika Gaba , Padmaakkshi Chakravartty .

Course - B.Sc. Botany (Hons.) IInd year, B.Sc. Chemistry (Hons.) IIIrd & Ist Year, B.Sc. Life Science (Program) IInd Year.

Mentors – Dr. Gita Batra Narula , Dr. Pooja Baweja , Dr. Swarndeep Kaur Sethi , Dr. Kiran Soni



Affiliation – Department of Chemistry, Department of Botany, Maitreyi college, University of

NAME OF PARTICIPANT(S): Shweta Tiwari, Swarnali Panda, Charu Gupta, Padmaakkshi Chakravartty, Shivangi Saini, Rupika Gaba, Divya Bisht (Students from Botany hons., Life science hons., and Chemistry hons., IIIrd year)

COMPETITION NAME: Paper presentation on Polymeric Smart Nutribots for Sustainable Aquaponic agriculture under Summer internship program 2020-2021 organized by Maitreyi College, University of Delhi

POSITION: IInd

MODE OF COMPETITION: Google Meet

DATE OF COMPETITION: 5 October, 2021