

KKTM GOVT COLLEGE

DEPARTMENT OF BOTANY

ACTIVITIES OF THE DEPARTMENT: 2025-2026

Department of Botany, KKTM Govt College continues to maintain as an active Department in organizing and conducting various activities in both academic as well as non- academic level in an aim with overall progress of the students, college as well as the community.

ENVIRONMENTAL DAY CELEBRATIONS

On June 5th, 2025, World Environment Day was commemorated with an engaging session on environmental education and conservation, led by Prof (Dr.) Krishnakumar K, the Head of the Department. The session emphasized the importance of sustainability and the role individuals play in protecting nature.

As part of the celebration, students were encouraged to contribute to environmental preservation by planting a tree in their surroundings. They were instructed to capture a photograph of their planted sapling and submit the geotagged images to the department's official email before 5 PM. Additionally, they were reminded of their responsibility to nurture and protect the saplings to ensure their growth for future generations.

The event saw enthusiastic participation from second-year BSc students, with nearly 15 students successfully planting trees and submitting their geotagged photographs as evidence of their commitment to the cause. The initiative not only fostered awareness but also instilled a sense of responsibility among students to contribute to a greener future.

VEGETABLE GARDEN MAKING

As a Department always encountering with plants, we occasionally made the students to develop gardens with medicinal as well as ornamental plants. Instructions

are given to students to maintain a vegetable garden in the allotted area of the campus and also at their own home with various plants. The students of our Department actively participated in the activities under the supervision of teachers and lab assistants.

ONAM CELEBRATION

The Department of Botany, KKTU Government College, Pullut, celebrated Onam with great enthusiasm and vibrant festivities in August 2025. The event was marked by a Pookalam competition, where students showcased their creativity by designing intricate floral arrangements, symbolizing the spirit of unity and prosperity. Along with this, various colorful competitions were organized, engaging students in traditional games, cultural performances, and other fun-filled activities. The celebrations created a lively atmosphere, bringing together students, faculty, and staff in the joyous essence of Kerala's most cherished festival.

Teachers and staff actively participated by extending heartfelt Onam greetings to students, reinforcing the bond between faculty and learners. The event highlighted the cultural richness of Onam, allowing students to embrace tradition while fostering teamwork and creativity. The enthusiastic participation of students made the occasion memorable, reflecting the true essence of the festival. The program concluded on a joyful note, with everyone cherishing the moments of togetherness and celebration.

STATE BIOCONTROL LABORATORY VISIT: REPORT

The students of Semester 3, 2nd year B.Sc Botany Minor, conducted an educational visit to the State Biocontrol laboratory Mannuthy, Thrissur, on 16th of October 2025. The purpose of the visit was to practical exposure to various biocontrol agents and biofertilizers used in sustainable pest management.

Reshma madam Agricultural officer began the session by explaining that biofertilizers are living microorganisms that enrich soil fertility by fixing atmospheric nitrogen, solubilizing phosphorous and Stimulating plant growth, whereas biocontrol agents are beneficial microorganisms that helps in managing pests and plant diseases through

biological means, reducing the dependence on chemical pesticides. She highlighted the growing importance of these eco-friendly technologies in ensuring long-term soil health, crop productivity and environmental protection.

During the session, students learned in detail about several key biocontrol organisms cultured and maintained in the laboratory. Among them, *Trichoderma viride* was introduced as a beneficial fungus that suppresses soil-borne fungal pathogens such as *Rhizoctonia* spp, *Fusarium* spp and *Pythium* spp while also promoting plant growth and root development. *Beauveria bassiana*, another Important entomopathogenic fungus is used effectively against insect pests like white flies, beetles, and Caterpillars by injecting and killing them through natural parasitism. We also studied *Verticillium lecanii* fungus effective against soft-bodied insects such as aphids, thrips and whiteflies, commonly found in vegetables and ornamental crops. Additionally, *Pseudomonas fluorescens*, a beneficial bacterium was discussed for its dual role in controlling soil borne pathogens and enhancing plant growth by producing growth-promoting substances and inducing systemic resistance in plants.

Apart from these, we observed entomopathogenic Nematodes (EPNS), which are microscopic worms that attack and kill soil dwelling insect pests, serving as a natural alternative to chemical insecticides. Students also learned about Trico card, a commercial formulation of *Trichoderma viride*, used widely by farmers for seed treatment, soil application and compost enrichment to protect crops from fungal diseases.

Reshma madam further explained the methods of applications for these bioagents, including seed treatment, soil applications and foliar sprays, depending on the target pest or disease. she also emphasized the significance of proper storage condition noting that the shelf life of biocontrol agents varies. They introduced selling products like *Pseudomonas fluorescence*, Tale Based formulation, *Verticillium lecanii*, *Trichoderma viride*, Trico card, *Beauveria bassiana* etc...

The visit to SBCL provided the valuable hands-on knowledge about the production, formulations and practical usage and biofertilizers and biocontrol agents. Overall, the experience was highly informative and inspiring, reinforcing the importance of adopting

biological solutions for greener and healthier future in agriculture.

The students were accompanied and guided by Rameena K Jamal (Assistant Professor) and Umesh A R (Lab assistant) from the department whose supervision ensured the smooth and disciplined conduct of the visit. Then constant support and encouragement helped the students stay engaged and make the most out of the learning experience.



MAINTAINING TERRARIUMS

The Botany Department has consistently taken the initiative to in still a deep understanding of plant life among students by engaging them in practical and creative activities. One such initiative is the annual creation of diverse Terrariums and Cactariums. This hands-on project aims to provide students with a comprehensive understanding of the life cycle patterns of various plants, their interactions within ecosystems, and, ultimately, to cultivate an empathetic approach toward caring for the Earth. By immersing themselves in the process of building these miniature ecosystems, students gain valuable insights into ecological balance and sustainability.

Terrariums and Cactariums serve as miniature models of larger ecosystems, allowing students to observe plant interactions in a controlled environment. Through this initiative, students witness firsthand how different plant species coexist, compete for resources, and contribute to their microhabitats. The carefully designed glass enclosures provide a self-sustaining environment where plants thrive by recycling moisture and nutrients. This project not only enhances scientific knowledge but also raises awareness about the delicate balance required to maintain harmony among organisms. As students actively engage in creating and maintaining these miniature green worlds, they develop a sense of responsibility towards protecting nature and preserving biodiversity.

The inspiration behind this initiative comes from the dedicated faculty members of the Botany Department, who consistently encourage students to explore the wonders of plant life beyond textbooks. By guiding students through the selection of plant species, designing the layout of terrariums and cactariums, and teaching them proper care techniques, the teachers play a pivotal role in shaping environmentally conscious individuals. The process involves meticulous planning, from choosing the right combination of succulents, ferns, mosses, and cacti to ensuring proper layering of soil, pebbles, and activated charcoal to maintain a healthy microenvironment. These activities not only nurture scientific curiosity but also foster creativity among students.

The impact of this initiative extends beyond the participating students to the entire academic community. The beautifully crafted terrariums and cactariums are

displayed in the department, attracting admiration from visitors, faculty members, and fellow students. The sight of these thriving miniature landscapes serves as a constant reminder of the importance of ecological balance and the need for sustainable practices. Many visitors express their appreciation and encourage students to continue such meaningful environmental projects. This positive reinforcement motivates students to explore further innovations in plant conservation and habitat restoration.

Moreover, this initiative aligns with global environmental movements that advocate for greener practices and the preservation of biodiversity. By engaging in such projects, students not only enhance their academic knowledge but also develop a lifelong commitment to ecological responsibility. They learn that even small efforts, like maintaining a terrarium, can contribute to larger conservation goals. These experiences empower students to apply their learning beyond the classroom, whether by participating in community gardening, afforestation projects, or advocating for environmental sustainability in their future careers.

CHRISTMAS CELEBRATION

The Department joyfully celebrated Christmas in 2025 with a series of festive activities that brought together students and faculty in a spirit of unity and cheer. The celebrations commenced with a traditional cake-cutting ceremony, symbolizing togetherness and the joyous essence of the season. Students enthusiastically participated in the making of a beautifully crafted Christmas Crib, showcasing their creativity and dedication to the holiday tradition. Additionally, the department actively took part in the Christmas Carol competitions organized by the College Union, where students showcased their musical talents and festive spirit through melodious renditions of classic carols. The vibrant atmosphere was filled with laughter, music, and goodwill, making the event a memorable and heartwarming experience for everyone involved. The celebration not only fostered a sense of camaraderie among students and faculty but also reinforced the values of love, joy, and sharing that define the essence of Christmas.

STUDY TOUR (REPORT)

An educational tour was organized from 5th January 2026 to 10th January 2026 with

the aim of providing students an opportunity to gain practical exposure and deepen their understanding of research and environmental studies. The tour was conducted under the supervision of Smt. Rameena K Jamal (Assistant Professor of Botany) and Sri. Umesh A R (Lab Faculty). A total of 21 students participated in the tour including 12 female and 9 male students, ensuring active and balanced academic participation throughout the journey.

The tour included visits to various research institutions, exploration of ecologically significant sites and the study of plant species across different ecosystems. This report presents a detailed account of the itinerary, observations made, and the educational outcomes achieved during the tour.

Ref: Order No. DCETVM/10487/2025-G3 Dated:02/12/2025

Date: 05/01/2026, KSCSTE Malabar Botanical Garden, Kozhikode-A study tour was organized for the students to Coorg, Chikkamangaluru, and Dandeli with the objective of enhancing practical knowledge of ecology, biodiversity, and natural resource management. Study tour of 21 students accompanied by two faculty members, commenced on 05/01/2026 from Thrissur railway station. Reached Calicut at 10 am and visited **KSCSTE Malabar Botanical Garden, Kozhykod** where students got the opportunity to explore different vegetations, Taxonomy lab, Herbarium and molecular biology lab facilities. From Calicut railway station departed to Mangalore at 3 pm.

Date: 06/01/2026, In Coorg, the students visited **Harangi Reservoir, Chiklihole Dam, Golden Temple (Namdroling Monastery)**, and nearby **bamboo forest areas**. At Harangi Reservoir and Chiklihole Dam, students learned about watershed management, irrigation systems, and the role of reservoirs in supporting agriculture and local ecosystems. The visit to the Golden Temple provided cultural exposure and an understanding of the relationship between human settlements and the surrounding environment. The bamboo forest visit enabled students to study the ecological importance of bamboo, its rapid growth, uses in rural livelihoods, and its role in soil conservation.

Date: 07/01/2026, In Chikkamagaluru, students visited **Sitalayankiri Point, Honnamma Small Falls, and Dadayyath (Dadahayath) Temple**. At Sitalayankiri Point, they observed the hill ecosystem, grassland–forest interface, and climatic influence on vegetation. The visit to Honnamma Small Falls helped students to understand freshwater ecosystems, riparian vegetation, and the importance of water conservation. At Dadayyath Temple, students gained cultural awareness and observed traditional practices.

In Date: 08/01/2026, Dandeli, the focus was on forest ecosystems and riverine biodiversity. Students observed tropical moist deciduous forests, medicinal plants, and wildlife habitats

and learned about the ecological significance of the Kali River and protected forest areas.

Date: 09/01/2026, At Gokarna , visited **OM baech, Kudle Beach**, then on the way to **Manglore railway station** visited **Murudeswar temple** too. Returned to Thrissur railway station on 10/01/2026, at 2.30 pm.

Overall, the study tour proved to be highly educational, helping students relate classroom learning to field observations and strengthening their awareness of biodiversity conservation and sustainable resource utilization.



REPORT ON FIELD VISIT / ACADEMIC PROGRAMME

The Department of Botany, KKT M Government College, Pullut, in association with the Nature Club, Bhoomithrasena, and IQAC, organized an academic field-oriented programme titled **“Into the Muddy Marvel: A Journey Through Mangrove Wetlands”** on **Tuesday, 03 February 2026, at 10.30 a.m.**

The programme was inaugurated by the Principal, **Prof. (Dr.) Bindhu Sharmila T.K.** The session was led by the resource person **Dr. Sreelakshmi S.**, Post Doctoral Researcher, Department of Marine Biology, CUSAT. The programme focused on creating awareness about mangrove wetlands, their ecological significance, biodiversity, and their role in coastal protection and sustainable ecosystems.

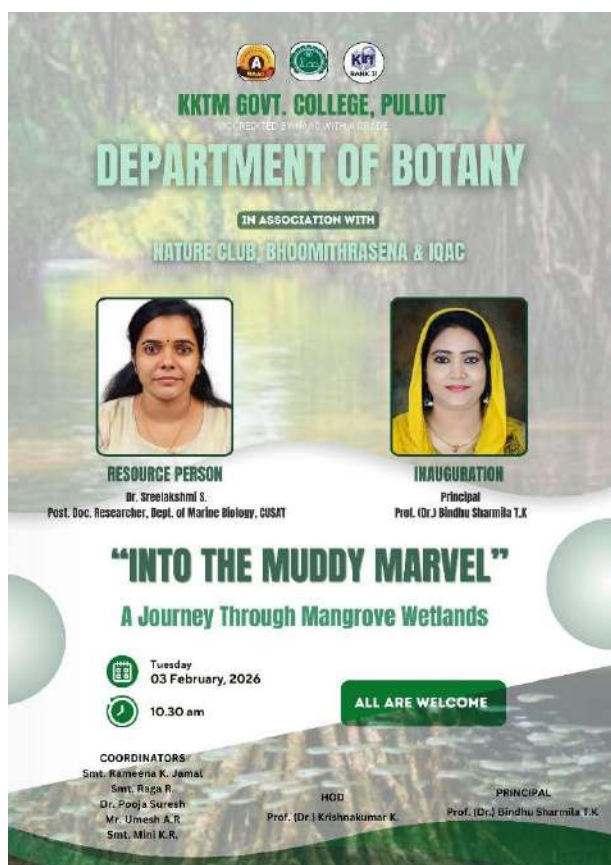
Through the session, participants gained valuable insights into the structure, adaptations, and conservation importance of mangrove ecosystems. The programme helped students understand the relevance of wetland ecosystems and encouraged environmental responsibility and conservation awareness.

The programme was coordinated by **Smt. Rameena K. Jamal, Smt. Raga R., Dr. Pooja Suresh, Mr. Umesh A.R., and Smt. Mini K.R.**, under the guidance of **Prof. (Dr.) Krishnakumar K., Head of the Department of Botany.** The event witnessed active participation from students and faculty members and concluded successfully, fulfilling its academic and environmental objectives.

Programme Activities:

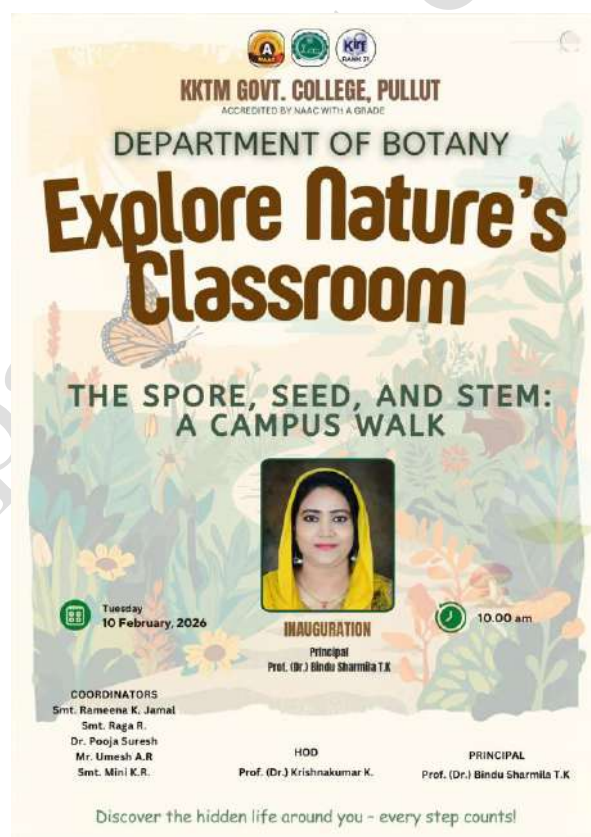
- **Educational Session:** Students learned about the **role of mangrove forests** in preventing soil erosion, supporting marine biodiversity, and mitigating climate change. Resource person: Shri. Manoj Kumar I. B, Environmentalist.
- **Placard Campaign:** Students held banners with messages like **"Protect Wetlands, Preserve Life"** and **"In Every Drop of Water, There is a Story of Life"** to spread awareness.
- **Tree Planting Drive:** Students planted saplings in the mangrove area to restore degraded sections and enhance forest cover.
- **Discussion & Reflection:** Faculty members and environmental experts interacted with students, highlighting the urgent need for **community-driven conservation initiatives.**

This programme successfully instilled **environmental responsibility** in students, fostering a commitment to preserving natural ecosystems. The hands-on experience not only **enhanced their knowledge** but also encouraged them to take active roles in **biodiversity conservation**. The event was a step toward building a more environmentally conscious generation.



Report: "Explore Nature's Classroom – The Spore, Seed, and Stem: A Campus Walk"

The Department of Botany at KKTm Govt. College, Pullut, in collaboration with the Nature Club, organized an insightful and interactive campus walk titled "Explore Nature's Classroom – The Spore, Seed, and Stem" on Tuesday, 10 February, 2026. The program commenced at 10:00 am and was officially inaugurated by the college Principal, Prof. (Dr.) Bindu Sharmila T.K., who highlighted the importance of experiential learning in understanding biodiversity. Guided by the motto "Discover the hidden life around you – every step counts!", the initiative aimed to transform the campus into a living laboratory, allowing participants to observe and study various plant structures, reproductive methods, and ecological niches firsthand. Under the guidance of the Head of the Department, Prof. (Dr.) Krishnakumar K., and coordinated by Smt. Rameena K. Jamal, Smt. Raga R., Dr. Pooja Suresh, Mr. Umesh A.R., and Smt. Mini K.R., the event successfully fostered environmental awareness and a deeper appreciation for the local ecosystem among the participating students.



BOTANY ASSOCIATION PROGRAMME

The Botany Association Inauguration of KKTMM Government College, Pullut, was held with great enthusiasm on December 18, 2025 (Friday) at 10:00 AM. The event marked the formal launch of the association, aiming to foster academic excellence, research enthusiasm, and environmental consciousness among students. The inauguration witnessed the presence of esteemed guests, faculty members, and students who gathered to celebrate the occasion.

Objective of the Botany Association

The Botany Association was established with the goal of promoting scientific temperament and environmental awareness among students. Its key objectives include:

- Encouraging students to engage in research activities related to plant sciences.
- Organizing seminars, workshops, and invited talks to enhance subject knowledge.
- Promoting conservation activities, including tree planting and biodiversity awareness.
- Creating a platform for student interaction and leadership development in botanical sciences.
- **Inaugural Ceremony**
- The event commenced with a formal welcome address, followed by the inauguration by Farsiii. The lighting of the ceremonial lamp symbolized the beginning of a new journey for the association. The Chief Guest, Dr. Geo Joseph, Assistant Professor, Carmel College (Autonomous), Mala, addressed the gathering, emphasizing the significance of botany in modern scientific advancements and its role in addressing environmental challenges.
- **Invited Talk by Dr. Geo Joseph**
- A key highlight of the event was an invited talk by Dr. Geo Joseph, Assistant Professor, Carmel College Mala (Autonomous). Dr. Geo Joseph delivered an insightful lecture on emerging trends in botanical research and the importance of plant sciences in sustainable development. His speech inspired students to explore interdisciplinary research in botany, bridging traditional plant sciences with modern innovations.

- **Student and Faculty Participation**

- The event witnessed enthusiastic participation from students and faculty members. Students engaged in discussions, shared their ideas on future association activities, and interacted with the guest speaker. The faculty members expressed their support in guiding students toward practical applications of botany in research and conservation.



FAREWELL PRORAMME FOR THIRD YEAR STUDENTS



A warm and memorable farewell programme was organized to bid adieu to the Third-Year Botany students on March 2, 2026, at the Botany III DC classroom. The event was meticulously coordinated by the Second-Year and First-Year students, who worked together to make the occasion a heartfelt and joyous celebration. The event served as a platform to express gratitude to the outgoing students for their contributions to the department while wishing them success in their future endeavors. The programme was formally inaugurated by Prof. Dr. Krishnakumar K., Head of the Department, who shared words of encouragement and appreciation for the graduating batch. The other faculty members of the department also addressed the students, extending their best wishes for their future academic and professional journeys.

The farewell programme was filled with lively entertainment and engaging activities, creating an atmosphere of joy and nostalgia. The junior students showcased their creativity through cultural performances, including songs, dances, and skits, dedicated to their seniors. Various fun-filled games and interactive sessions were conducted, bringing moments of laughter and togetherness. The Third-Year students also took the opportunity to share their experiences, memories, and heartfelt gratitude towards their teachers and classmates, making the event even more emotional and meaningful.

As the programme progressed, the bond between students and teachers was evident, reflecting the strong sense of camaraderie within the department. The farewell concluded on a warm and emotional note at 4:00 PM, leaving behind cherished memories for all attendees. The event was not only a celebration of the graduating batch's journey but also a moment to inspire the juniors to continue fostering unity and excellence in their academic pursuits. With the blessings and best wishes from faculty and fellow students, the Third-Year students departed with a sense of accomplishment and hope for a bright future ahead.

FUTURE PERSPECTIVES

Future Plans of the Botany Department, KKTU Government College, Pullut

The Botany Department at KKTU Government College, Pullut, envisions a series of innovative and eco-friendly initiatives to enhance the academic and environmental

atmosphere of the campus. These proposed activities aim to promote sustainability, research, and environmental awareness among students and faculty. By implementing the following plans, the department aspires to contribute to both scientific advancements and conservation efforts:

1. Sustainable Agriculture and Green Campus Initiatives

- Establish and maintain a **vegetable garden and tapioca garden** on the campus to promote organic farming practices and sustainable food production.
- Expand the existing **Orchid Garden** into a large-scale botanical attraction, allowing for periodic exhibitions and research opportunities.
- Revitalize and enhance the **Medicinal Plant Garden** by incorporating rare and valuable plant species with significant medicinal properties, creating a valuable resource for research and education.
- Collaborate with the **Kerala Forest Research Institute (KFRI) and Mannuthi Agricultural University** to plant a variety of **fruit-bearing trees** on the campus, contributing to biodiversity and ecological sustainability.
- Develop a **greenhouse with a drip irrigation system** to improve water conservation and plant growth efficiency, demonstrating modern agricultural techniques to students.

2. Environmental Awareness and Conservation Programs

- Organize **Earth Day and World Water Day celebrations** in a more impactful manner by conducting **public awareness meetings, expert lectures, and environmental campaigns.**
- Initiate **campus-wide afforestation projects** and tree-planting drives to enrich green spaces and combat climate change.
- Develop strategies for **waste management and composting systems**, encouraging students to participate in sustainable practices.
- Implement **rainwater harvesting systems** to efficiently utilize and conserve water resources within the campus.

3. Research and Technological Advancements

- Collaborate with other colleges and research institutions to **promote scientific advancements, especially in biological sciences** through knowledge exchange programs.
- Conduct **seminars and workshops** on advanced scientific topics such as **Nanotechnology, Molecular Biology, and Bioinformatics**, inspiring students to explore emerging fields of research.
- Establish a **biogas plant and solar energy panels** within the college premises to promote renewable energy and sustainability efforts.

4. Biodiversity Conservation and Sustainable Practices

- Strengthen collaboration with the **Department of Zoology** to make the **college pond more productive** by introducing sustainable aquaculture practices and biodiversity conservation techniques.
- Develop a **butterfly garden and pollinator-friendly spaces** to support local biodiversity and enhance ecological balance on campus.
- Initiate **herbal research projects** involving students, encouraging them to explore ethnobotanical studies and traditional plant-based remedies.

5. Student Engagement and Holistic Development

- Encourage students to actively participate in all conservation and scientific initiatives, fostering a **nature-loving and result-oriented mindset**.
- Organize **eco-tourism and botanical study trips** to important ecological sites, helping students gain practical knowledge beyond textbooks.
- Provide hands-on training in **hydroponics and vertical gardening**, introducing students to innovative farming techniques suitable for urban spaces.

Expected Outcomes

- Increased awareness among students and faculty about **sustainability, conservation, and modern agricultural practices**.
- Development of a **self-sustaining campus** with green energy solutions, improved water conservation, and productive green spaces.
- Establishment of **strong research collaborations**, leading to enhanced academic

and career opportunities for students.

- Enriched campus biodiversity, offering students real-time exposure to **ecological and conservation efforts**.
- A shift towards **environmentally responsible behavior** among students, making them proactive in addressing global environmental challenges.

By implementing these initiatives, the Botany Department of KKTM Government College, Pullut, aims to set a benchmark for excellence in **environmental sustainability, scientific research, and student engagement**. These plans reflect the department's commitment to shaping a greener and more knowledgeable future.