

## DEPARTMENT ACTIVITIES:

To bring an attitudinal change in our students, to boost their confidence, to expose our students to the happenings around them, to heighten their sense of belonging, the Botany Department, Shillong College felt the need to form a platform in the form of the Botanic Club which was formally inaugurated on the 3<sup>rd</sup> of December 2003. The Motto of the Botanic Club is 'Learn, share and grow'.

Botanic Club organises students' seminars and discussions from time to time on subject related topics. It serves as a platform for students to express their views and opinions. Students are also encouraged and prepared for various activities like, summer school, quiz, debate etc in the college as well as in other institutes.

Fresher's, farewell and teachers day programs are organized by the students on a regular basis. Training Programmes, Popular Talks and Seminars by reputed personalities are organized in the Department to sensitize the students regarding current scientific issues. In addition, students are taken for field trips and study tours as part of the Curriculum.

### Fresher's cum Farewell meet (2018) in the Department



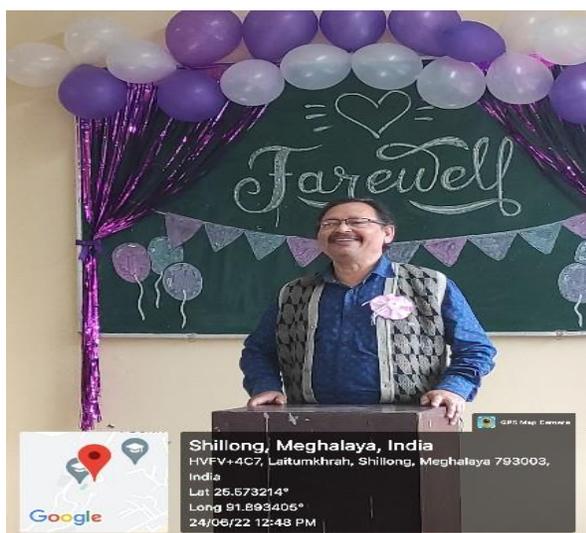


**Fresher's cum Farewell 2019**



## Farewell Programme on June 24<sup>th</sup>, 2022, Department of Botany

A farewell programme for the outgoing Sixth-semester Botany (honours) was organized by the Second & Fourth-semester students on June 24, 2022, in the Botany laboratory. The former head of the dept Shri. S K Roy was also given a farewell together with them. The farewell programme was attended by all the teachers and students. The programme started with a welcome speech by a Second-semester student. This was followed by a speech by the Head of Department Smt. Darina Kharshandi. There were also speeches by the outgoing students which were followed by a group song by the Second-semester students. The former H.O.D also gave a speech on the occasion. Some activities for the outgoing students were also conducted which was followed by felicitation of the outgoing students. The programme ended with a vote of thanks by the Fourth-semester student.



## Teacher's Day programme in the Department



**Field trip to Mawnianglah, Baniun, Upper Shillong**  
**On the 19<sup>th</sup> of September 2016**

The department of Botany took the students for a field study of the flora of Upper Shillong. The place chosen was Mawnianglah, a village in Milliem block in East Khasi Hills District of Meghalaya. It is located 9 km south of Shillong city. The students were instructed to go out in groups and trek the village, listing the names of the plants observed along the way. The students also collected some unique plants for the making of herbarium sheets. At the end of a long and tiring day, the students assembled for lunch before heading back to the city.



**Students at Mawnianglah village**



**Students moving in Groups**



**Students collecting plants**



**Lunch time after a long day**

**Field trip to Mawmuthoh, Smit  
On the 16<sup>th</sup> of September 2017**

Mawmuthoh is a small locality in the village of Smit which is 12 km away from the city of Shillong. Mawmuthoh is known for having an isolated population of a rare water lily called *Nymphaea tetragona* confined to a pond. In the Indian sub continent, the Pygmy water-lily, *Nymphaea tetragona* is found only in Mawmuthoh, Meghalaya although it is found in the Indo china border, where it is used by the Buddhists as an 'offering flower' and hence conserved as a 'ritual plant' in temple gardens. The plant has showy white to pinkish flowers and in the past, the rhizome has been used locally to cure acute diarrhoea and dysentery and was also used to join bone fractures by tribal practitioners. Since this plant fails to regenerate in nature because of incomplete development of the embryos and high susceptibility to pests and insects, the plant population is on the verge of extinction with only 20-30 plants remaining in the pond. The department of Botany had therefore found it interesting and important for the students to witness and study the plant.



**Students by the pond**



*Nymphaea tetragona* in the pond

## **FIELD TRIP TO THE DEPARTMENT OF HORTICULTURE, UMSNING**

**On the 25<sup>th</sup> SEPTEMBER 2018**

The department of Botany had organized a field trip to the Department of Horticulture, Umsning, Ri Bhoi District, Meghalaya on the 29<sup>th</sup> September 2018. The place of interest was chosen for the trip so as to enable the students to observe the cultivation of tea and learn about its processing first hand on the field. The place is more than an hour drive south from Shillong. So the day started early where the students assembled in the college premises to travel to the destination. On reaching there, the students first interacted with the Officer-in-charge of the Department of Horticulture, Umsning, Shri. M Marbaniang who introduced them to the three units present in the premises of the tea garden- Plantation, Processing and Marketing. The students were then divided into groups, each under an instructor. The students were first taken to the vermicompost corner where vermicompost, straw and cowdung are processed to be used as fertilizer in the fields. The plantation is mostly of the Assam and Darjeeling tea and hence, the procedure of plantation is exclusively of these two varieties where the square and rectangular method with an in-between distance of 1 m between two plants was followed. After being enlightened with the details of plantation, the students were taken to the uphill sites to observe the plucking of the tea buds by the workers. It was observed that the three-bud method of plucking was used. The students were then taken to the Processing Unit or factory where freshly plucked leaves were exposed for 14-20 hrs to a fan that is turned on to remove the moisture from the leaves. The leaves which then contained only 55-60% moisture were then transferred into the rolling machine, where rolling took about 40-45 minutes in the case of Black tea after which it is transferred into the Fermentation Machine. Tea leaves will produce an aromatic fragrance only after undergoing fermentation. After 3 hours in the fermentation machine, the final processing involved putting the fermented leaves in the dryer for about 95-180.c and converting it into powder. The tea is of two kinds:1. Green tea where after plucking is directly processed to denature enzymes, and 2. Black tea where processing is done the following day of plucking. The students were then taken to the nursery beds where they witnessed the tips of the tea leaves being planted in a row with just a small space in between. When they are big enough to survive, the saplings are then transferred into the open field. The day ended with an incredible amount of learning for all the participants.



**Students and Faculty at the Site**





**Students interacting with the instructor**

**FIELD TRIP TO UMSAWLI**  
**On the 7<sup>th</sup> NOVEMBER 2019**

The Department of Botany had organized a field trip to Umsawli, a small village located in Mawpat, New Shillong, East Khasi Hills District. This village has virgin forests with flora that would have been seen in the the city of Shillong if the city was not disturbed. So, this field trip was planned in order to allow students to learn and see the natural flora of Shillong. Umsawli which is only half an hour drive from Shillong city, has been tagged the New Shillong since most of the national institutes and Government Offices including the Secretariat are being constructed there. However, the Forested areas there are still undisturbed and natural flora is prettily conserved. The students could explore the forest which houses not only large trees but shrubs, herbs and climbers as well. The forest is dissected by small streamlets and ponds with aquatic plants that are not seen in the polluted waters of Shillong City.



**Students at Umsawli**



**Flora At Umsawli**

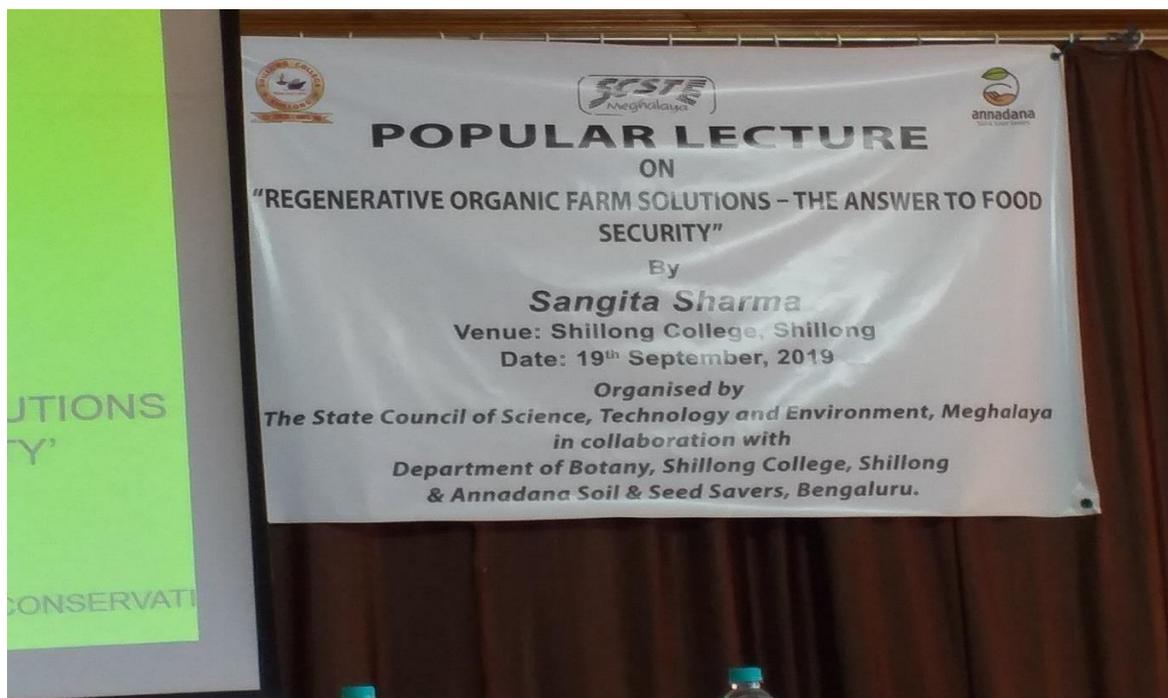
On the 20<sup>th</sup> April 2019, a befitting Farewell programme was organised in the college Conference Hall to bid adieu to Smt. Florida Kharlukhi, the Laboratory Assistant of Botany Department. Smt. Florida Kharlukhi retired from her service in December 2019 after having served the college for 36 years.



Later in the day, a farewell party for the outgoing 6<sup>th</sup> semester students was arranged where the Head Of Department, Shri S.K. Roy gave the farewell speech.



On the 19<sup>th</sup> September 2019, a Popular Lecture On 'Regenerative Organic Farm Solutions—The answer to Food Security' was organised by the State Council of Science, Technology and Environment, Meghalaya in Collaboration with the Department of Botany, Shillong College, Shillong & Annadana Soil and Seed Savers, Bengaluru. The programme was held in the College Conference hall and was attended by a huge audience of students and faculty as well.



The key speaker was Sangita Sharma, who hails from Bangalore and is a keen champion for Organic and sustainable Farming. She comes from a family that believes and rigidly consume Organic Food. The family turned their land at Aeroville, Bangalore into a Community that lives on organic and sustainable Farming. The Community comprises of hundreds of villagers who mostly are uneducated but have a lot of wisdom regarding field agricultural organic practices that most agriculturists and horticulturists lack. Around 40 varieties of local rice and countless varieties of chilli peppers, brinjals and other heritage plants are grown.



Sangita Sharma along with other community members then felt the need to conserve these heritage plants in the form of seeds and thus formed a Trust called the 'Annadana' Soil and seed savers in 2001.



The Students were enlightened with the different methods of seed saving that are not only less expensive but also simple and traditional.



During the programme, Sangita Sharma introduced to the audience an uneducated person who has lived and grown in her community since childhood, but has become an expert in mixed farming, composting and Crop Rotation. He talked about the practical problems of pest management and the solutions thereof. The student audience was intrigued by such an approach since most students come from an agricultural background.



*Students interacting with Sangita Sharma*



**On the 12<sup>th</sup> of March 2021, at 1 pm, the Department of Botany organised a popular talk on 'Nature Conservation'.** The Speaker was Pallabi Chakraborti, a Master degree holder in Botany who changed her career to Wild Life because of her love for animals and birds. She is currently based in Dehradun at the Wildlife Institute of India –Category 2.

The programme began with a welcome speech by Smti. D. Lyngdoh who warmly welcomed the Speaker, the students and faculty members into the programme.



Pallabi divided her speech into two sections. In the first section, the speaker spoke about her six years of 'on the field' experience in the Kaziranga National Park. Her assignment involved documenting the number of animals present in the park. She narrated at length about the resistance encountered with the local community and the militants who had taken shelter in the park. The techniques used in the counting of animals included traditional methods like identifying paw and hoof prints to sophisticated methods using Camera traps and Paw/Hoof Print marking.

In the second section Pallabi Chakraborti enlightened the students about the many possible career options in Forestry and Wildlife Sciences available after their Graduation. This section saw a lot of Students' interest and positive response.

The programme ended with a vote of thanks from Smt. M. V. T. Marwein that was then followed by a light refreshment.

## **Entrepreneurial Exposure Visit to Tynrai Hydroponic Centre, Nongpoh by the 6<sup>th</sup> Semester Students, Department of Botany, Shillong College on the 21<sup>st</sup> of April 2022.**

On the 21<sup>st</sup> of April 2022, 27 students from the 6<sup>th</sup> semester Department of Botany Shillong college, were taken for exposure visit to the hydroponics unit of Tynrai at Deisibon nursery, Nongpoh approximately 51 kilometres from the city. The Tynrai small industry is owned by Dr. Rebecca Sailo of Bethany hospital.

Dr. Rebecca in her introductory lecture spoke about healthy eating and also emphasised on sustaining an obese free lifestyle through her experience. As we took a tour of the farm, Dr. Rebecca showed us areas under fruit plantation (dragon fruit, lemon, oranges, strawberry, pineapple and wild berries). The rearing of exotic poultry like Emu birds and turkey was also shown.



This was followed by the visit to the 3 Poly houses where the hydroponics units were set up. The students were given a brief introduction to soilless farming and hydroponics along with demonstration on the technical unit.



The students were very excited to see the whole setup of the hydroponics units covering an area of more than 2000 square feet. Various stages of hydroponics steps were discussed which included the initial plantlet growth on coconut chalk boxes followed by transfer to the hydroponics leans. Discussion on the mediums used in the hydroponics solution. Details about the choice of plants that can be used for hydroponics with life examples showing the various stages was also discussed. From sampling

of 3 to 4 weeks until the final product was ready for marketing it takes 48 days for market consumption depending on the need of the market. Around 6 batches go for market value, selling and harvest throughout the year.



Pest free best systems were also maintained using sticky traps in yellow and blue to make all the Poly houses pest free. Air circulations were maintained in each Poly house using engineering technologies.

economically important plants.

A large variety of plants hydroponically grown included varieties of parsley, pokchoi, baby spinach, curly karls, lettuce, iceberg lettuce, rosemary, basil and other varieties of

The students of the 6<sup>th</sup> semester interacted and asked many questions about the entrepreneurship aspect and the business of hydroponics. Dr Rebecca answered all the queries of the students and invited them over for internships as well. It was a healthy discussion with all the students and the teachers who accompanied them.



The students were served with home juices from the farm fruits. A tour of the whole farm under the hospitality of Dr. Rebecca and her staff was also done. The students ate their lunch at the farm and took photographs for the report. The department of botany as a gesture of appreciation handed over the honorarium and a stole as a token of appreciation to the resource person Dr. Rebecca for her kind lecture and hospitality. The program wined up by 4:00 pm. Then the students boarded the bus to return back to the college campus at Shillong and return home. As a concluding note,

on behalf of Dept of Botany, Dr. Reema thanked the Principal and the administration for supporting the visit.