



»»» NEWSLETTER «««

# DEPARTMENT OF BOTANY

## TOP NEWS OF THE YEAR



The Marian Star Centre, Department of Botany organized an in-house training programme on Digitalization of Campus Flora, sponsored by Department of Biotechnology, Star College Programme, New Delhi from 14th to 18th December 2021 in the Botany Laboratory for the II UG students of Botany.

Dr. F. Dayana Lobo and Ms. S. Pauline Jenifer, Assistant Professors of Botany St. Mary's College (Autonomous) led this program. Dr. F. Dayana Lobo gave an introductory talk about plant taxonomy. 10 students from II B.Sc Botany collected 89 different plants from the College campus, scanned the plants and kept the same for herbarium. 10 students were benefitted through this programme.

## IN-HOUSE TRAINING PROGRAMME ON DIGITALIZATION OF CAMPUS FLORA



## IN-HOUSE TRAINING PROGRAMME ON HORTICULTURE

The Marian Star Centre, Department of Botany has organized the In-house training programme on Extraction and analysis of oil, sponsored by Department of Biotechnology, Star College Programme, New Delhi from 14th to 18th December 2021 in the Botany Laboratory for the II UG students of Physics and Chemistry Departments. Ms. A. Lucas Rexceline, Assistant Professor of Physics, Dr. G. Flora, Assistant Professor of Botany and Ms. Selvaanathi, Assistant Professor of Botany St. Mary's College (Autonomous) were the resource persons. The programme started with the prayer song and a welcome address. Dr. G. Flora and Ms. Selvaanathi started the talk with the basic introduction about the different types of oils and gave hands-on training for extraction of groundnut, coconut and sunflower oils by oil extractor and clove and eucalyptus oils by Clevenger apparatus on the first and second day of the training. Ms. A. Lucas Rexceline conducted a hands-on experience in finding refractive index, coefficient of viscosity of different oils and she explained the principle behind the procedure too on the remaining two days. 45 students were benefitted through this programme.

# IN-HOUSE TRAINING PROGRAMME METAL ANALYSIS USING FLAME PHOTOMETER



The Marian Star Centre, Department of Botany organized an in-house training programme metal analysis using flame photometer, sponsored by Department of Biotechnology, Star College Programme, New Delhi from 14th to 18th December 2021 in the Botany Research Laboratory for the III B.Sc. students of Botany department. Principle, theories, methodologies and experimental requirements involved in metal analysis were explained by Ms. Selvaanathi A, Assistant professor of botany, St. Mary's college (Autonomous), Thoothukudi. Students were separated into groups and allowed to carry out the experiments to get the hands on experience. Students collected water samples from various locations of Thoothukudi district, Tamilnadu, India to estimate the mineral content. Plants available in the campus were collected and minerals were quantified. A total of 43 students benefited from this programme.



## INVITED LECTURE ON BSIP: THE HOME TO STUDY FOSSILS AND ALLIED SCIENCES



The Marian Star Centre, Department of Botany organized an invited lecture on BSIP: The Home to Study Fossils and Allied Sciences sponsored by DBT, Star College Programme, New Delhi for the II UG students. Dr. Anupam Sharma, Scientist E, Birbal Sahni Institute of Paleobotany, Lucknow was the resource person. The invited talk started with the basic introduction about the Birbal Sahni Institute of Paleobotany, its history and infrastructure were explained briefly. The definition of geology, scope and the geological time scale were also clearly explained by him. He also explained about the continental drift and how it affected the fossil formation and its studies. In the next section, he informed us about the various laboratory equipments used for the fossil studies and its utilization. 38 students from the department of Botany were benefitted through this invited lecture.

**ABOUT US**

- Established on September 10th, 1946 by Professor Birbal Sahni, FRS
- Functioning as an autonomous Institute since November 12, 1969, shifted under DST in 1971
- Devoted to the research on fundamental and applied aspects of Palaeobotany and allied Earth System Sciences



Settings

# INVITED LECTURE ON HUMAN WILDLIFE CONFLICT MITIGATION

The Marian Star Centre, Department of Botany has organized an invited lecture on Human Wildlife conflict Mitigation, sponsored by Department of Biotechnology, Star College Programme, New Delhi on 17th December 2021 in the Fatima Hall for the II UG, II PG students of Botany and II PG students of Zoology. Mr. Abishek Tomar, District Forest Officer, Thoothukudi district was the resource person. He started the talk with the basic introduction about the wildlife. He threw insight about the conflict that wild animals were facing now a days. He shared some of the common methods that could be used to avoid the entry of wild animals in the rural areas and about the Wildlife Protection Act which was introduced in 1972. He also guided and motivated us on how to crack competitive examinations. At last, he bid a call for the students to join the wetland mission. Nearly 45 students were benefitted through this programme.



## WORKSHOP ON BAKING FOR BEGINNERS

The Marian Star Centre, Department of Botany has organized the workshop on Baking for Beginners, sponsored by Department of Biotechnology, Star College Programme, New Delhi on 21st and 22nd December 2021 in the Botany Laboratory for the II UG students of Physics and Chemistry Departments. Mrs. A. Karolin, Assistant Professor of Food Science and Nutrition, Holy Cross Home Science College and Mrs. A. Marithangam, Assistant Professor of Food Science and Nutrition, Holy Cross Home Science College were the resource persons. Mrs. A. Karolin started the talk with the basic introduction about food processing and preservation and gave hands on training for fish pickle, pine apple squash, tomato sauce, mixed fruit jam, green chili pickle, tomato pickle and garlic pickle making on the first day of the workshop. Mrs. A. Marithangam gave a talk on baking and bakery products and gave hands on training for cake and cookie making on the second day. They ignited the entrepreneur skills of the students and created a path to face this competitive world. 33 students were benefitted through this programme.

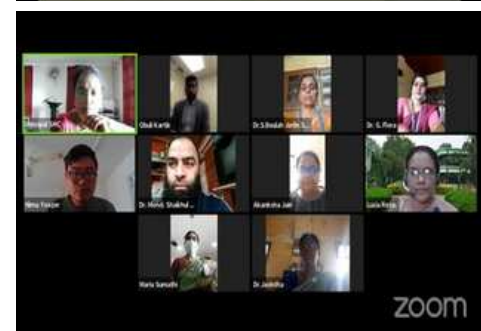


# WORKSHOP ON MICROALGAL TECHNOLOGY

The Marian Star Centre, Department of Botany St. Mary's College (Autonomous), Thoothukudi organized an International Workshop on Microalgal technology, sponsored by The Department of Biotechnology, New Delhi under the Star college programme from 16th February 2022 to 18th February 2022. The first day of the workshop started with the Prayer song followed by the formal welcome address by Dr. M. Glory, Head and Associate Professor of Botany. Rev. Sr. Dr. A.S.J. Lucia Rose, Principal, St. Mary's College (Autonomous), Thoothukudi gave the presidential address. The first session started by introducing the resource person of the day Dr. Obulisamy Parthiba Karthikeyan, Research Scientist and Lecturer, Department of Civil and Environmental engineering, South Dakota School of Mines and Technology, USA. He gave the lecture on the topic "Microalgae: a bio factory for valuable products." He gave a brief introduction about the microalgae culture and identification. About 89 participants have benefitted from today's programme.

II Day (14.02.2022) Dr. P. Santhanam, Associate Professor, Department of Marine Science, School of Marine Sciences, Bharathidasan University, Tiruchirappalli was the resource person. Dr. Santhanam delivered a talk on "Harmful Algal Blooms: Causes, Impacts and Mitigation Strategies". Dr. P. Anantharaman, Professor and Dean, Centre of Advanced Study in Marine Biology, Faculty of Marine Sciences, Annamalai University, Paragipettai, Tamilnadu. The expert speaker, he addressed the participants on the topic "Microalgal Culture Techniques

The Day 3 (18. 02. 2022) session of Marine microplastic pollution – Threat to marine environment, Dr. R. Rajaram, Assistant Professor, Department of Marine Science, Bharathidasan university, Trichy, explained, what is microplastics and their types and how it is hazards to the biodiversity. Nearly 78 participants from various colleges all over the country attended the programme. The Valedictory of the workshop was organized at the end of the session. Dr. Sripriya, Assistant Professor of Zoology, St. Mary's College gave the valedictory address.



## FDP ON IPR

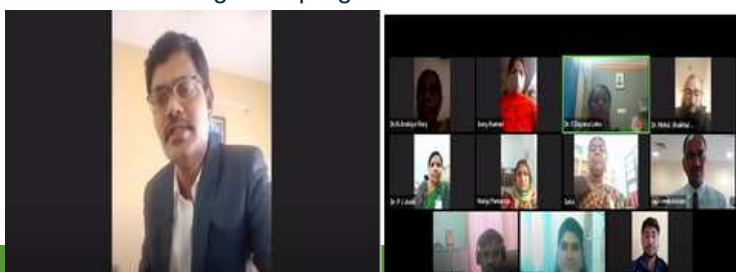
Day-1: Report on Faculty Development Programme on "Intellectual Property Rights"

The Marian Star Centre, Department of Botany has organized the Faculty Development Programme on "Intellectual Property Rights" on February 21, 2022, through virtual mode (Zoom meet). Dr. M. Glory, Head & Associate Professor of Botany has welcomed the gathering. Dr. Sr. A. S. J. Lucia Rose, Principal, St. Mary's College (Autonomous), Thoothukudi has felicitated the meeting. Dr. M. Sakthivel, Assistant Professor, Guru Gobind Singh Indraprastha University, New Delhi, gave the speech on "Introduction to IPR- National & International Perspective". The speaker shared his knowledge of IPR and its concepts, Copyright Act, Patents Act, Trademarks, etc., with the participants, helping them understand the broad concept of the FDP. The FDP was so interesting and lively. Totally 125 faculties all around India were benefitted through this programme.



Day-2: Report on Faculty Development Programme on "Intellectual Property Rights"

Dr. B. Maria Sumathi, Assistant Professor of Botany, introduced the speaker. Dr. Deepa, Registered Patent Agent, Chennai, gave the speech on "Introduction to Patent System and Filing Procedure". The speaker shared her knowledge of Patent, Indian Patent Act, non-patentable inventions and how to file the patent application with the participants. Totally 84 faculties were benefitted through this programme.



Day-3: Report on Faculty Development Programme on “Intellectual Property Rights” On February 23, 2022, Mr. A. K. Rajaraman, Advocate, High Court of Madras, Chennai gave the speech on “Trademarks & Geographical Indications”. The speaker shared his knowledge of Trademarks, geographical indications and its benefits with the participants. Totally 105 faculties were benefitted through this programme.

Day-4: Report on Faculty Development Programme on “Intellectual Property Rights” On February 24, 2022, Dr. P. R. L. Rajavenkatesan, Associate Professor & HoD, VIT School of Law, VIT, Chennai gave the speech on “Copyright”. The speaker shared his extensive knowledge of Copyright and its law, with the participants, helping them understand the broad concept of the FDP. The FDP was so interesting and lively. Totally 93 faculties were benefitted through this programme..

Day-5: Report on Faculty Development Programme on “Intellectual Property Rights” The Faculty Development Programme on “Intellectual Property Rights” on February 25, 2022, the speaker, Dr. Narendran Thiruthy, Assistant Professor, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur gave the speech on “Biodiversity & Traditional Knowledge”. The speaker shared his knowledge of law which regulates biological resources with the participants. The FDP was so interesting and lively. Totally 114 faculties were benefitted through this programme. The 5th day of FDP came to an end with the proper vote of thanks by Dr. M. Glory, Head & Associate Professor of Botany. Dr. G. Flora, Assistant Professor of Botany, delivered the gratitude towards the delegates and organizers of the FDP.

# INTERNATIONAL WEBINAR ON CLIMATE CHANGE AND FUTURE CHALLENGES



International Webinar on Climate Change and Future Challenges was organized by PG and Research Department of Botany, St. Mary's College (Autonomous), Thoothukudi, Tamil Nadu, India sponsored by Department of Biotechnology, Ministry of Science and Technology, New Delhi.

A total of 347 participants from India and abroad including faculty, research scholars and students from various institutions had registered for the webinar. The program commenced on 3rd March 2022 with prayer followed by welcome address by Dr. Glory, Associate Professor and Head, St. Mary's College (Autonomous), Thoothukudi. The event was felicitated by Dr. Sr. A.S.J. Lucia Rose, Principal, St. Mary's College (Autonomous), Thoothukudi. The keynote address on the topic Climate Change and Warming Planet was delivered by Dr. Jayshree Venkatesan, Managing Trustee, Care Earth Trust, Chennai. She urged the younger generation to take initiatives on managing climate change. Session I was chaired by Prof. Dr. Azwinndini Muronga, Executive Dean of Science, Nelson Mandela University, South Africa on The Harsh Realities of Climate Change. Session II on Climate Change and Energy Options for Sustainable Future was delivered by Dr. D.K. Srivastava, Homi Bhabha Chair Professor, National Institute of Advanced Studies, Indian Institute of Advanced Studies Campus Bengaluru – 560 012, India.

Day 2, Session III on the topic Climate Change and Food Security Solution was delivered by Dr. Desigan Kumaran, Structural Biologist, Biology Department, Brookhaven National Laboratory, Upton, New York 11973, USA. Prof. Dr. Sanjeet Mehariya, Department of Chemistry, KBC-huset (KBC), Umeå University, 901 87 Umeå, Sweden shared his knowledge for the session IV on the topic Algal Bio-refinery: Promising Approach for Minimizing Carbon FootPrint. His lecture gave deep insights of reducing atmospheric CO2 into value added products. Participants shared their feedback during the feedback session. The Valedictory address was delivered by Dr. Nambi Appadurai, Director, Climate Resilience Practice, WRI, India. His address on climate change urged the participants to take initiatives from home itself. Dr. Flora, Assistant Professor of Botany, St. Mary's College (Autonomous), Thoothukudi delivered the vote of thanks.



# Marian Star Science

## Expo '2022



The Department of Botany organized two days science exhibition 'Science Expo 2022' on 10th and 11th March 2022. More than 2600 students from various schools of Tuticorin district visited and witnessed the displays. The exhibition exhibited live specimens of marine and terrestrial plants and their products which had commercial and medicinal values. The plants displayed were mainly focused based on school curriculum. So, students were able to learn the plant classification, morphological features and various adaptive features to their respective environments. Students were well known of marine resources and their utilization. The fossil slides displayed gave an insight on evolutionary history of plants to the students.

## IN-SERVICE TRAINING PROGRAMME IN BIOLOGY

The Marian Star Centre organized an In-service Training Programme for School Teachers, sponsored by DBT, Star College Programme, New Delhi. As a part of this programme, the department of botany gave the training on 24th March 2022 in the Botany Laboratory. 15 school teachers participated in the session held at the Botany laboratory. The morning session comprised of Biochemistry experiments. The school teachers were divided into four groups and the various experiments were conducted. It was started with the separation of photosynthetic pigments using paper chromatography. The teachers were excited to see the separation of photosynthetic pigments and preserved the paper to show to their students. This is followed by the estimation of sugar, amino acid, protein and starch. We met again in the afternoon after lunch where the training on pollen tube germination, mitosis and meiosis hands on training and floral dissection were carried out. Each teacher was provided with the In-service training manual.



## Field trip to Long Wood Shola, Kothagiri and Government Botanical Garden, Ooty

The Department of Botany organized a two days field trip to Long Wood Shola, Kothagiri and Government Botanical Garden, Ooty for the II UG, I PG and II PG students as a part of their curricular activity on 1st and 2nd April, 2022. Mr. Raju, Friends of the Shola forest and a forest ranger accompanied the students into visiting the forest. Mr. Raju explained about the microclimate condition prevailed in the Shola. We had a great experience inside the Shola and went for trekking as well. We could able to observe and identify some rare plants too. The next day we went to the Government Botanical Garden, Ooty. The students filled their field note book by observing various plants available there. We went to the Government Tea factory too to get to understand the processing of tea preparation. We came back to the college on 3rd April morning. 53 students and 3 staff members were benefitted through this field trip.



## Report on Inauguration Ceremony of Caussanel Science Club

Integrated Educational Partnership between St. Mary's College (Autonomous), Thoothukudi and St. Francis Xavier Higher Secondary School, Thoothukudi commenced with the inauguration ceremony of Caussanel Science Club organized by PG and Research Department of Botany, under DBT star college scheme on 11th April 2022 at Popes Hall, St. Francis Xavier Hr. Sec. School. The program started with prayer song followed by welcome address by Dr. Jacintha Tamil Malar. A, Assistant Professor of Botany. Rev. Bro. Arockiadoss, Principal, St. Francis Xavier Hr. Sec. School felicitated over the event. Students from department of botany performed cultural events imparting the importance of conservation.

Resource person Dr. Beulah Jerlin.S, reflected her profound knowledge on the topic Biodiversity and its conservation and highlighted the importance and the steps to be undertaken at personal level towards conservation. It was followed by another session on competition for student audience. The immense enthusiasm and zeal in the students to learn is the main driving factor which made them participate in the competitions like Thirukuralilariviyal, twin partner and bagged their prizes. The winners were distributed with prizes by Dr. Glory, Head and Associate Professor of Botany and Rev. Bro. Arockiadoss, Principal, St. Francis Xavier Hr. Sec. School. It was followed by a science song. The talents of future scientists were evident with display models that was exhibited by students. The office bearers for the academic year 2022- 2022 were elected. The program came to the end with the vote of thanks delivered by Dr. Flora. G, Assistant Professor of Botany, urging the student community in conserving the biodiversity.

Our sincere thanks to Rev. Sr. Flora Mary, Secretary, Dr. Sr. Lucia Rose, Principal, Dr. Glory, Head and Associate Professor in Botany, Dr. Sr. Arockia Jenecious Alphonse, Overall Co-ordinator, DBT Star College Scheme and Assistant Professor of Botany, and organizing committee members, Department of Botany, St. Mary's College (Autonomous), Thoothukudi.

We are grateful to Rev. Fr. Dr. Arockiasamy, S.J, Superior, Rev. Fr. K.A Augustine, S.J, Correspondent, Rev. Bro. Arockiadoss, S.J, Principal and the science teachers of Caussanel club St. Francis Xavier Hr. Sec. School, Thoothukudi. We sincerely acknowledge the financial support of DBT Star College Scheme.



# MOU



Signed Memorandum of Understanding between Marian Star Centre, Department of Botany, St. Mary's College (Autonomous), Thoothukudi and Department of Food Science and Nutrition, Holucross Home Science College, Thoothukudi.



Signed Memorandum of understanding between Department of Botany, St. Mary's College (Autonomous), Thoothukudi and V.J.S. Fumigation, Thoothukudi.

- Doctoral Committee meeting was conducted for Ms.J. Rathinam on 2nd November 2021 under the guidance of Dr. Arockia Jenecius Alphonse.
- Doctoral Committee meeting was conducted for Ms. G. Mary Stephyon 3rd November 2021 under the guidance of Dr. G. Flora.
- Doctoral Committee meeting was conducted for Ms. J.N. Monisha on 18th February 2022 under the guidance of Dr. Arockia Jenecius Alphonse
- Doctoral Committee meeting was conducted for Ms. A. Selvaanathi on 14th March 2022 under the guidance of Dr. S. Beulah Jerlin.
- Doctoral Committee meeting was conducted for Ms. C. Vimala on 14th March 2022 under the guidance of Dr. S. Beulah Jerlin.