



Department of Botany

(We are united in propagation and promotion of the Interests of Botany on Earth)

St. Albert's College (Autonomous) Ernakulam, Kerala, India.

Ephemeral 2018-19

PREFACE

In order to facilitate student mobility across institutions within and across countries and also to enable potential employers to assess the performance of students, the University Grants Commission insisted on introducing uniform grading system in the Universities. And as all are aware Plant Science is once again assuming a prominent role in academics and research. Renewed emphasis on developing medicinal products from native plants has encouraged ethno-botanical endeavours a clear mileage. The destruction of the rain forests has made the need for research more imperative and has spurred efforts to catalogue the plant biodiversity in these environments. Efforts to feed the growing populations in developing nations have also given plant scientists a cutting edge with genetic engineering and the creation of transgenic crops. However, Botany courses have seen a decline in enrolment. By taking a multidisciplinary approach to studying the relationship between plants and people, we are trying constantly to stimulate interest in students more to plant sciences and encourage them to take up further studies in these areas. By exposing

students to society's historical connection to plants, we hope to instil a greater appreciation for the botanical world.

Established in 1947 Department of Botany St Albert's College, Ernakulam is preparing knowledge seekers in Botany for the past 72 years. As all are aware the Department is entering into its platinum jubilee and a period of five years spanning from 2017-22 has been marked for the celebrations. The announcement of the same was made during the Saphathy celebrations of the college in 2017 along with the Albauto Communique 2016 followed by Albertian International Knowledge Summit (AIKS 2017), seminars, workshops and trainings programmes were organized with a special thrust to the development of the students, faculty, supporting staff, alumnus, retired faculty and staff with their involvement and incorporation was ensured for the same. A good number of programmes are being conducted and more are in the pipeline. Our mission is to retain the place of our Department as the best centre for knowledge seekers in Botany in the state and to stake a claim in the country as well.

In 2016, when the College was granted academic autonomy by the University Grant's Commission, the department has also vested with the power and freedom for framing the curriculum to cater the needs of students in Botany of the region and time. A new curriculum and syllabi for the students from 2019 admission has been framed by the esteemed members of the BOS in Botany, with the limited freedom vested upon it for satisfying the local, regional, national and global requirement of the subject.

We wish to acknowledge most gratefully the helpful criticisms, comments and suggestions received from the Teachers, Friends, Botanists and Educationists who have helped during the functioning of last one year. We place on record our greatest gratitude to Chairman, Principal and all the associating staff of the College and every member of the Board of Studies in UG Botany, former faculty and staff, Alumni Association and all involved who were instrumental in guiding us in the desired direction set forth by the visionaries.

Team Botany, SACA.

**“Live as if you were
to die tomorrow.
Learn as if you were
to live forever”.**

--Mahatma Gandhi

CARING PLANTS

CARING LIVES

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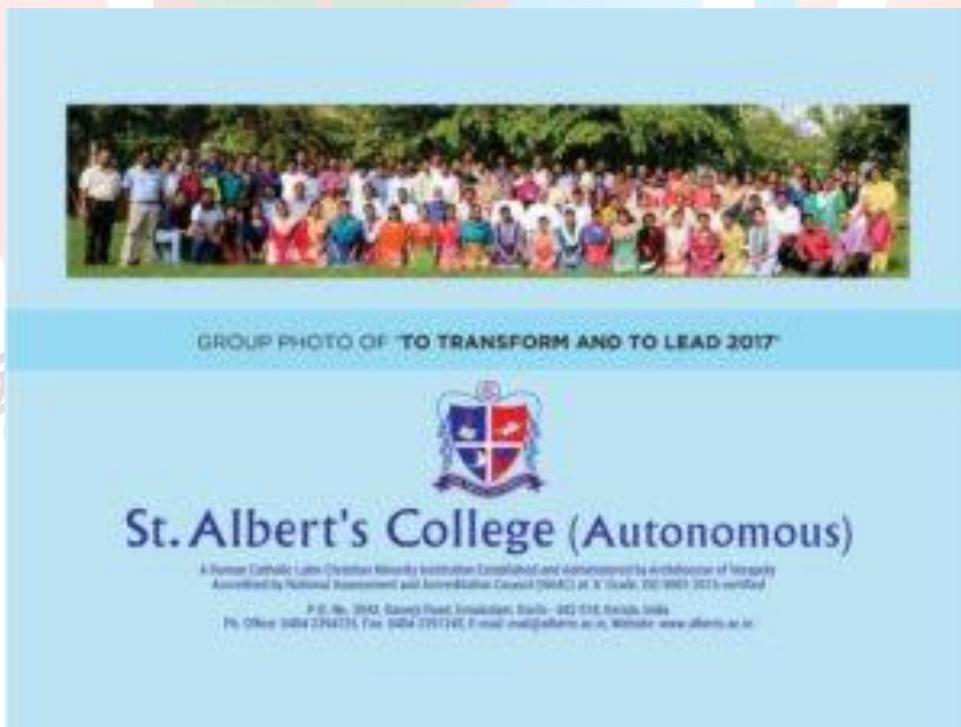
Staff Profile & Area of Specialization

NAME	QUALIFICATION	DESIGNATION	SPECIALIZATION	YEARS OF EXPERIENCE	No. of Ph D STUDENTS
J JAMESON	Ph.D.	HoD & ASSOCIATE PROFESSOR	PLANTPHYSIOLOGY, ENVIRONMENTAL BIOLOGY	24	3
L JOSE	Ph.D.	ASSOCIATE PROFESSOR	PHYCOLOGY TAXONOMY, ENVIRONMENTAL BIOLOGY	28	2
SIJU M V	Ph.D.	ASSISTANT PROFESSOR	MICROBIOLOGY	14	-
MADHUSUDHANAN K	Ph.D.	ASSISTANT PROFESSOR	MYCOLOGY, APPLIED BOTANY	14	3
DRISHYA K R	M.Sc.	ASSISTANT PROFESSOR	GENERAL	8	-
MARY JOSEPH	M.Sc.	ASSISTANT PROFESSOR	GENERAL	8	-
ANNA ANCY ANTONY	Ph.D.	ASSISTANT PROFESSOR	TAXONOMY	4	-
ANISHA S	Ph.D.	ASSISTANT PROFESSOR	MOLECULAR BIOLOGY	4	-

Academic Retreat & Strategic Planning Workshop- May28-30,2018

'Well begun is half done'

The three-day academic retreat and strategic planning workshop- **"To Transform and To Lead"** was held from the 28th to 30th of May, 2018 at Ashirbhavan, Kacheripady with the aim of equipping and orienting all the staff members for the challenges in the academic year ahead. The entire faculty of the Department of Botany participated in the same.



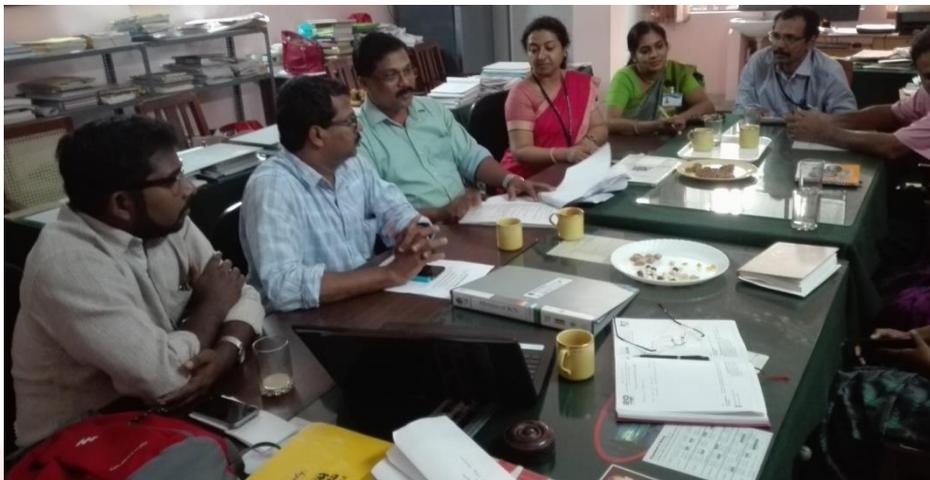
Board of Studies in Botany (UG) Programme Structure & Outcome

The Board of Studies in Botany (UG) recognizes that curriculum, course content and assessment of scholastic achievement play complementary roles in shaping education. The restructured Curriculum for Undergraduate Programme of Botany envisages Undergraduate Education as a combination of general and specialized education, simultaneously introducing the concepts of breadth and depth in learning. It also stresses learning to learn rather than learning of specific lessons. The attempt is to prepare the students for lifelong learning by drawing attention to the vast world of knowledge of plants and introducing him/her to the methodology of systematic academic enquiry. With this in mind, we aim to provide a firm foundation in every aspect of Botany and to explain a broad spectrum of modern trends in Botany and to develop experimental, observational, computational skills also which lead him as an ambassador of sustainable development of our country. The programme is hence designed with the following outcomes in 10 diverse spheres of human development and truth searching through plant sciences.

Regular sitting of BOS team in connection with curriculum revision was initiated in the department and the final draft was submitted to the governing council before submitting the same in the University.

Sl.No:	Name	Designation	Qualification
	Dr. J. Jameson (Chairman)	HoD, Associate Professor	Ph.D
a) Entire faculty with qualification			
1.	Dr. J Jameson	HoD and Associate Professor, SACA*	Ph.D
2.	Dr. L. Jose	Associate Professor,SACA	Ph.D
3.	Dr.Siju M. Varghese	Assistant Professor, Member Secretary, SACA,	Ph. D
4.	Dr. K. Madhusudhanan	Assistant Professor, SACA	Ph.D.
5.	Smt .DrishyaK.Reghuvaran	Assistant Professor, SACA	M.Sc
6.	Smt. Mary Joseph	Assistant Professor, SACA	M.Sc
7.	Dr. Anna Ancy Antony A	Assistant Professor,SACA	Ph.D
8.	Dr.Anisha S	Assistant Professor, SACA	Ph.D
b) Experts in the Subject: (two)			
1.	Dr Siril E A	Assistant Professor, Dept. of Botany, Kerala University.	Ph.D
2.	Dr. Jose Puthoor	Associate Professor, Dept. of Botany, Calicut University.	Ph.D
c) Nominee of Vice Chancellor (one)			
1.	Dr.Jomy Augustine	HoD and Associate Professor, St Thomas College, Pala.	Ph.D
d) Placement Representative.			
	Sri. Jose .P	Corporate Sector (Garden & Nursery)	MD, National nursery, Trichur.
e) Meritorious alumnus.			
	Dr.StephenSequeira,	Assistant Professor, Maharaja's College, Ernakulam	Ph.D
f) Experts from outside whenever special courses of studies are to be formulated			
1.	Dr.Vinod Thomas	Scientist, Rubber Board of India, Kottayam	Scientist
2.	Mr.Nikesh R	Agricultural Assistant, Neri Mangalam,Kerala	M.Sc.
a) Other Teachers of the same Faculty			
1.	Dr.Krishnakumar KS	Assistant Professor,SACA	Ph.D.
2.	Dr.Bijoy V M	Assistant Professor,SACA	Ph.D.

SACA St. Albert's College (Autonomous), Ernakulam



Internal Examinations and Open Houses

The Internal exams of both the semesters along with the assignments/ seminars/ viva were conducted according to the centralized schedule given by the Office of the Controller of Examinations. Retest was conducted for those who were absent for the internal exams. The marks so obtained were tabulated and shown to the parents during the Open House that was conducted at the end of every semester.

National Seminar-Cum-Workshop on Syllabus Revision-1st December, 2018

A National Seminar-cum-Workshop on Syllabus Revision: Outcome-Based Education and Assurance of Learning was held on 1st December, 2018 in which all our faculty members participated.

Rev. Fr. V. Joseph Xavier SJ and Dr. John Peter, Dean, St. Joseph Institute of Management were the resource persons. After the prayer, the Principal welcomed the gathering. The different outcomes were discussed under 3 parameter heads- Programme Educational Objectives (PEO), Programme Outcomes (PO) that reflect the 12 Graduate attributes and Course outcomes (CO). In the afternoon, we were divided into our subject groups Department-wise and discussed about the learning objectives and wrote down the objective statements.

Former Faculty and Alumnus in Student Support and Development Programmes of the Department

As part of the Platinum Jubilee Celebrations of the Department, an invitation lecture series was initiated giving special focus on former faculty and Alumnus towards student support and development programmes.

II. ADMINISTRATIVE ACTIVITIES

**ACADEMIC AND ADMINISTRATIVE AUDIT (AAA) PEER TEAM
VISIT FROM 7TH TO 9TH OF NOVEMBER, 2019**



The Academic and Administrative Audit (AAA) Peer team from the Xavier Board of Education visited the Campus on 7th, 8th, and 9th of November 2018. The data of last three years were compiled and presented. After the General presentation by the Principal, every Head of the Department had to present the Department Review for seven minutes. The AAA Peer team visited each and every Department according to the pre-determined schedule. They spent almost two hours in the Botany Department on 7th November, 2018 from 2:30 pm. onwards. The files and other information were analysed and feedback was given regarding which action has been taken.



III. CO-CURRICULAR ACTIVITIES

Inauguration of Botany Association and Know your Plant Initiative (“THARUMAHIMA”) - 3rd July, 2018

Dr. J. Jameson, Head of the Department welcomed the gathering. It was presided by Principal Dr. M.L Joseph. The Principal in his presidential address congratulated the Department for their constant efforts in focussing on both curricular and extracurricular activities of the students pursuing their studies in Botany. Prof. Rita Manuel, the Chief Guest of the programme and Vice Principal, Maharajas College, Ernakulam, inaugurated the function.



Know your plant – a new learning initiative named ‘**Tharumahima**’ was then introduced by Dr. K. Madhusudhanan the coordinator. The programme was launched by Rev. Fr. John Christopher, the Vice Principal.



Fresher's Day Organised by the Botany Association-

13th July, 2018

The new students of first year B.Sc. Botany were welcomed by their seniors in the Department of Botany with a lot of enthusiasm and cheer. The second and third year students put up music and dance programmes as well as conducted games in order to break the ice and befriend their juniors.



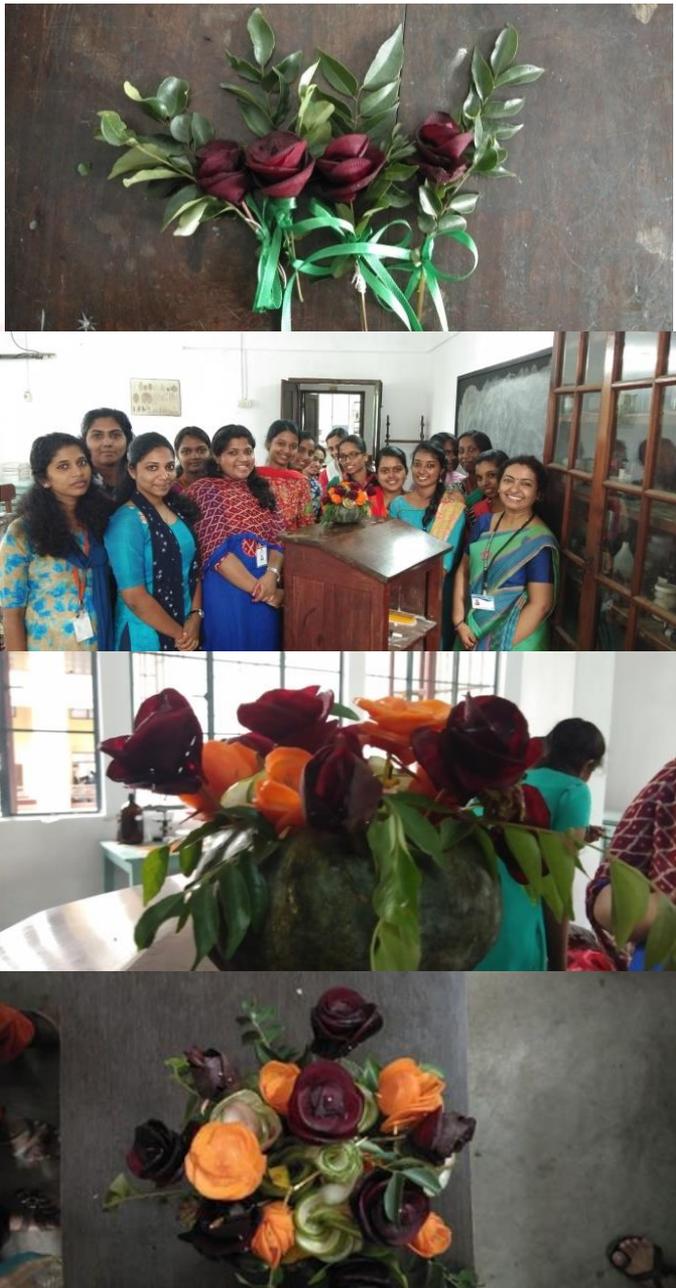
Alumni Talk

Dr. E A Siril, Assistant Professor, Department of Botany, University of Kerala who is an eminent alumnus of the Department, is in regular support as BoS member (2018-21). He was the resource person for the special talk for PG students.



Skill development programme: Training in vegetable and fruit carving “POMOLERICRAFT” -11th June, 2018

A session on vegetable and fruit carving was conducted for PG students after class hours by Prof. Mary Joseph. The students were imparted with the skill to make a bouquet of roses using carrot, beetroot and cucumber. The vegetable roses were arranged in baskets made using pumpkin and watermelon. The same was displayed on the table during the programmes “Ammakkorupidi Pacchakari” and Botany Association inauguration. Mini-bouquets of vegetable roses were presented to the chief guest and other dignitaries on the dais.



Finishing School: Fostering Proficiency

Mock Interview- Prof. A.X. Edwin (Former HoD Retd.)

Under this initiative a talk was conducted on 6th of September, 2018, Thursday at Emmanuel hall at 11:30 am. Dr. Siju M. Varghese welcomed the gathering and introduced the respected chief guest Prof. A.X Edwin. Dr. M.L. Joseph, Principal presided over the meeting. Prof. A.X Edwin communicated his views and inculcated the value of skill development and personality development required for interviews. A small interactive session with the chief guest was also conducted.





BIDAS -Botany Intradepartmental Annual Sports Meet 7th December 2018

The ceremony started by seeking the blessings of God. A welcome talk was given by Dr. K .Madhusudhanan. The sports meet was inaugurated by Dr. L. Jose followed by oath-taking led by Vineetha of 1st M.Sc. Botany.





A warm up was given with a run of 400mtr by all the group members which was initiated by Dr. Sajeev Jos, HOD, Physical Education. The meet was flagged off by Dr .J. Jameson, HoD, Botany.





Annual Sports of St. Albert's College

Interdepartmental competitions on 2nd February, 2019

The Department of Botany took active part in the interdepartmental competitions. **The colourful start of the programme was marked by the march past and ended up with the Aerobic dance competition. In both the events the Department of Botany won the first position.** In all other competitions students actively participated and brought glory to the Department.





Arts Fest January 2019



ALBERTIAN STAR AWARD COMPETITION

This is a competition aimed at selecting a final year student as the best outgoing student/Albertian Star. There will be five levels to this competition and the focus will be on selecting a student who excels not only in academics but holistically, someone who possesses those life skills that would help him/her handle challenges in life.

The competition was conducted at five levels with the following criteria / eligibility:

Level I

STAR COMPETITION NOMINEES - nomination from department level from:

Any final year (UG & PG) Albertian who

- Has no back papers/Should have cleared all papers in the first attempt itself
- Has above 90% of attendance (in case of no eligible candidates from a course, two students with the highest attendance and no back papers can apply)
- Is an active participant of the curricular, co-curricular and extra-curricular activities in and outside the college
- Has had no disciplinary action initiated against him/her

Level II (GEMS of the Department / Outstanding Students of the Dept.)

A 30 question long MCQ (Current Affairs, Basic Science & Math, History, English, Logical Reasoning) would be administered to the candidates. At the end of level II, four students from each course (2 in PG and 2 in UG) would be selected to the next level. In case of a tie, the candidate who has the higher score in extra-curricular activities would be selected.

These students would be called the GEMS of the Course.

Level III (LUMINARY of the Department/ Best student of the Dept.)

A power point presentation (PPT) round before an expert panel on any one aspect of the students' choice but related to the broader topic My Vision of the Future India. (Aspects can include technology/Environment/ education/economy/democracy/sustainable development etc.

At the end of Level III, 2 students from each course (1 UG and 1 PG) would be selected.

They would be declared as the outstanding students of the Course and would be called the LUMINARY of the Course.

Level IV (STARLETS of St Albert's College (Autonomous) / Albertian Best Student Nominees)

A group discussion round wherein students would be assessed on their Depth of subject knowledge

- Group behavior
- Leadership qualities
- Communication skills

- Use of appropriate verbal and non-verbal language
- Effective listening
- Level of confidence
- Clarity of expression

The end result would be 10 students who move into the final round.

These 10 Students would be called the STARLETS of St Albert's College

Level V the final (ALBERTIAN STAR / The Best outgoing Student)

- i. This would be an external presentation round before an audience comprising Management Representatives, Alumni Members, Teachers, PTA members and students.

This level would be an on stage programme where the dressing, manner, confidence and communication skills of the candidates would be judged by external experts.

- ii. The students would have to make a 7 minute presentation about themselves and why they should be selected as the Albertian Star.

Three external judges would interact with the students asking them questions on general issues and also based on their presentation.

- iii. The winner would be declared as the ALBERTIAN STAR. The First and the Second Runners Up would also be selected.

Albertian Botanist Stars: The Shining Glory



SPECIAL CONGRATULATIONS TO THE STARS IN THE DEPARTMENT!!!

1st Runner Up: Aghila Samji, II MSc Botany

2nd Runner Up: Sneha Gopinath, III BSc Botany



If we could do that...You too can.



Alumni Gathering of M.Sc. 2008-2016 Batch

Alumni Gathering - 2008-2016 batch MSc students with theme slogan "To Serve, Conserve and Construct Nature for the Coming Generations" was held on 13-10-2018 at 3.00 pm in the Emmanuel Hall. The program began with a silent Prayer was presided by Dr. J

Jameson the HoD. Dr Siju M Varghese, Coordinator, Alumni Gathering welcomed the gathering. Reflections & Memories were shared by Dr. L Jose, former HoD, Prof.V.P.Festus former faculty, Sri. Prashob P., Research Scholar and alumnus of the department, and Prof. Mary Joseph, Dept Secretary, proposed the vote of thanks.





**Alumni Gathering of B.Sc. Botany 1986-89 Batch
28th April, 2019**



ThiruvathiraPuzhukku - Introducing an Integrating Pazhma and its Importance to the New Generation

The students of first M.Sc. under the guidance of their tutor, Prof. Drishya K.R. prepared Thiruvathirapuzhukku and displayed the ingredients along with the recipe and highlighted its significance. It was inaugurated by our former HoD, Dr. L. Jose, while our Principal Dr. M.L. Joseph was the chief guest.



Thiruvathira is a very important centuries old Hindu festival that falls on the full moon day in the malayalam month of Dhanu (Dec.15 to Jan.15) during Thiruvathira nakshatram (star). Thiruvathira Puzhukku is made with a mix of root vegetables and beans that are in season. The tubers are nutritious and filling while the beans provide a good source of protein. This makes it significant for the ladies who forego rice-based meals as part of the Thiruvathira rituals. Eight different kinds of vegetables (**ettangadi**—loosely translated into eight things from the market) are used in this dish. Along with the tubers, plantains and beans (cow peas, horse gram, green gram or a mix) are added. This puzhukku is full of carbohydrates, fibre and proteins which are essential for maintaining the energy levels of the human body especially during abstention from rice. The puzhukku is especially good for the reproductive health of women.

Faculty members from different Departments visited the display and tasted the delicious puzhukku, after which they complimented our students with positive comments. It was indeed very different from

what we normally consume and hence left an indelible impression in everyone's mind.

X-Mas Star-Making Competition Department Of Botany Bagged the Third Prize



The Christmas celebrations on the College campus got off to a wonderful start on the 20th of December, 2018 with the inter-departmental star-making competition by the students from all the three degree classes who joined in the efforts to create a beautiful piece of craftsmanship and put up the star on time at 5 pm in the allotted space. Every class participated in the card-making competition too. On the 21st of December during the actual celebrations the winners of the competitions were announced and the Department of Botany won the third prize.

Study Tours - Integrating Nature with Knowledge Acquisition



Library Visit by II MSc students: The students of II MSc Botany were taken to the Library at Cochin University of Science and Technology on 4th October 2018. The visit was helpful in understanding the system in a scientific library and also the facilities available there which could be used at any time.

Study trip to Munnar: The students of I MSc Botany visited Munnar on 8th December 2018 as part of their first semester syllabus for the course on Bryology and Pteridology. They collected various specimens

required for their practicals on their way there, and in and around Munnar. They stayed overnight at Mt. Carmel Church dormitory and returned the next evening after visiting Eravikulam National Park at Rajamalai.



Visit to INS Vikramaditya: The students of I BSc Botany and I MSc Botany accompanied by their tutors Dr Anisha S and Ms.Drishya K.R., visited the famous Indian naval ship, INS Vikramaditya on 12th October 2018. The ship was docked at Willingdon Island and had been opened for visit. The ship was 930ft. long and 196ft. wide and had a runway for Naval airplanes to take off. There was an exhibition of various equipments and armoury used by the navy including lifesaving gadgets.



Lab Visit of III BSc Botany students: The students of III BSc were taken for a visit to UniBiosys Biotech Research Labs, Kalamassery on 6th February 2019 by faculty members Dr. K Madhusudhanan and Dr. Anisha S. The students were able to see the various tools and techniques used in the field of Biotechnology and Microbiology in the present day. They also got a demonstration of some of the experiments like PCR, gel loading, etc.



Research Institute visit by II MSc students: The II MSc students were taken to Kerala Forest Research Institute (KFRI), Peechi, Thrissur by faculty member Dr. Anisha S on 8th February 2019. The students visited the Biotechnology Division there and also had a glimpse of the Seed Centre, Butterfly Garden, Medicinal plants Garden, Herbarium and Palmetum. It was a very refreshing and inspiring visit for the students as they could see the kind of work being carried out there and could also get an idea of the prospects in the field of Plant sciences.

Study trips in Taxonomy: The final year B.Sc. and M.Sc. students travelled to Ooty in order to observe the flora and involve in collection of plant specimens for herbarium preparation. They were accompanied by two faculty members Dr. L. Jose and Dr. Anna Ancy Antony. The trips were conducted on 18th September, 2018 and 14th January, 2019 respectively for the two batches.





Celebration of Ethnicity: 8th February, 2019





During the Ethnic day celebrations, the whole college witnessed a riot of colours, music and dance when different ethnic groups put up their cuisine and cultural events for display. The students of Botany and Zoology participated in Margamkali and Parichaymuttu to depict the Catholic community while the dancers from Lakshadweep islands showcased their talents to enthrall the audience.

***Farewell... You Will Always Be Remembered With
Love***





The senior batch students of BSc and MSc were accorded a befitting farewell on 22nd February, 2019 with a lot of spirit and goodwill. Some of the students of the passing-out batches shared their personal experiences in the Department with their teachers and friends. After various cultural programmes performed by all the batches, lunch was provided. All the students departed with fond memories to cherish forever in their hearts.



BSc. BOTANY 2016-19

Farewell to Jose sir





Shubhkaamnayeinpyare bade bhaiyonaurmithron...

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4. EXTENSION/SOCIAL OUTREACH ACTIVITIES

WORLD ENVIRONMENT DAY- 5th June, 2018- Jointly organized by the Department of Botany and Haritha Fraternity of the College

June 5th- the people's day for doing something to take care of the Earth; **World Environment Day- 2018** of St. Albert's College, with its focal theme, "**Beating Plastic Pollution**", was coordinated by the Department of Botany in the Baccinelli hall at 11.30 AM. The function began with a *Harithaganam* sung by Miss Rosemary of II M.Sc. Botany. The Principal Dr. M.L. Joseph in his welcome address emphasized the importance of creating more awareness particularly on plastic menace to protect biodiversity. Rev. Fr. Antony Arackal, the Manager in his presidential address reminded each one about their duty in joining hands in this noble call to do something to take care of Earth. Shri. A.P.

Muhammad Hanish IAS in his inaugural address urged the youth to identify their role as environmentalists so that the coming generation would remain safe on this earth. He also reminded them that only if they start something seriously for the earth's protection would there be any change and that was the right time to start off. Mr.SajanPalluruthy, cine- artist was the chief guest of the function. He interacted well with the youth and encouraged everyone to contribute in a big way to propagate the focal theme of the year and beat plastic pollution.





Dr. J. Jameson, Head of the Department of Botany and the Co-ordinator of WED-2018 in his vote of thanks cum concluding remarks elaborated other programmes of **Haritha Nature (green)** which were launched on the same day and few others which were in the pipeline.

The other projects announced were

- Green campus protocol adoption
- Harithayuvaseena formation
- Harithasamrithi (College Vegetable Garden initiation)
- College general beautification programmes
- Ammakkorupidi Pacchakkary (the social outreach programme of the Botany Department)
- Energy & Water audit initiatives

- Public Transport Day adoption initiative for the staff and students of the College etc.

Projects in the pipeline are:

- Jalam Jeevamrutham – water and water body conservation and cleaning
- Mangalavanam Conservation Drive
- Campus Biodiversity Register

He urged each and every one of the Albertian Family to take up the challenge in making this noble venture a real success.

Launching of the Social Extension Programme AMMAKKORUPIDI PACCHAKKARY - 12th June, 2018

The launching of the mentioned Social Extension Programme was conducted on 12-06-2018 at the College Auditorium (Papali Hall). The programme started with a prayer song rendered by Ms Rosemary of II MSc Botany. All the teaching and non-teaching staff members and the students of the Department participated in the programme. The welcome address was delivered by Dr. J Jameson, Head- Department of Botany. The meeting was presided by Dr. M L Joseph, Principal, SACA who expressed great expectations from this programme. The programme was inaugurated by Mr. Rajeev P A, in-charge of HarithaKeralam, Cochin Corporation by giving away vegetable saplings, seeds and handbook on vegetable cultivation (Farm Information Bureau, Govt. of Kerala) to Class representatives of the Department of Botany, SACA.



Navadarsan - Junior Scientist Programme (Social Extension Activity): 23rd June, 2018 onwards

The Navadarsan Junior Scientist Programme is a joint venture of Navadarsan and St. Albert's College (Autonomous) under the auspices of the Ministry of Education of the Archdiocese of Verapoly. The sessions for Class X (first batch) and Class IX (subsequent batch) were conducted on selected Saturdays and public holidays. The classes were attended by the enrolled school students, and were handled by members of our faculty.

EXTENSION & OUTREACH PROGRAMMES

Herbarium Training: A two-day training programme in Herbarium Methodology was conducted on the 17th and 18th of September, 2018 for Smt. Lizzy P.O., Herbarium Keeper, Department of Botany,

Maharaja's College (Autonomous), Ernakulam by the herbarium keeper, Mr. Arjun Thomas. The second training programme was conducted for a research scholar from CUSAT on February 14th, 2019.



Herbarium Methodology Training to Students: Herbarium Methodology Training to Botany Students of other colleges (St. Xavier's College, Aluva, and St. Teresa's College, Ernakulam). Mr. Arjun Thomas, Herbarium Keeper of Botany Department, St. Albert's College, Ernakulam took classes for students and given demonstration on herbarium techniques.

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**Social Extension and Outreach Programmes
MOUs in the Areas**

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1. MoU between St. Albert's College (Autonomous), Ernakulam & Cochin International Airport Limited, Cochin, Kerala. Department of Botany Technical Support areas of Weed management, Phytoplankton studies, Floral profiling of waterbodies and associated terrains.
2. MoU between St. Albert's College (Autonomous) Ernakulam & Mulavukad Panchayath, Ernakulam.
3. MoU between St. Albert's College (Autonomous), Ernakulam & Paravoor Block Panchayath, Ernakulam. Support area: Organic Vegetable Gardening.

Social Commitment: Volunteers for Flood Relief

The students of Botany Department participated as volunteers for flood relief activities on 4th September 2018. They were about 42 girls and 9 boys who participated in the camp including students of Botany. The

whole team was divided into 5 groups and group leaders were assigned to lead each group.

The major centres were Municipal Community Hall, Collectorate, KBPS godown. The students helped to distribute the relief kits to flood-hit people according to the instructions. A group of students helped to pack the food materials. Some of the students helped in the systemized data entry of affected people in the district.



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Post-Flood Rapid Biodiversity Assessment of Cheranallore and Kadamakkudy Panchayaths- In association with Kerala State Biodiversity Board during September 2018

The Department of Botany of St. Albert's College has actively participated in the post-flood Biodiversity assessment of Cheranallore and Kadamakkudy Panchayaths in association with Kerala Biodiversity Board during September 2018. Dr. K. Madhusudanan and Dr Anna Ancy Antony the faculty members, Javad P (Research Scholar), Merrin Delna P S, Nicey Antony and Aiswarya Johny from PG Botany Students and Aparna AN , Gayatri K Satheeshan and Liya Johnson from UG Botany students participated in the survey.



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Financial support to a self help group at Gothuruth for replacement of a sewing machine (damaged in flood'18) and fight against plastic - campaign



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Inauguration of Wealth from Waste campaign at Samudrika premises, Aroor.





PUBLIC TRANSPORT DAY

1st Friday of every month | Reduce Carbon Footprint
11.30a.m. | 7th Dec 2018 | Papali Hall

VOLUNTEERS TRAINING PROGRAM & CAMPAIGN INAUGURATION

11.30 a.m. | 5th Dec 2018 | Emmanuel Hall

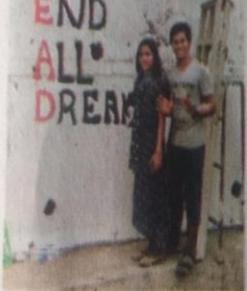
Organised by
St. Albert's College (Autonomous)

in association with
**Kochi Metro Rail Limited &
Centre for Public Policy Research (CPPR)**



KOCHI DIGEST

St Albert's College conducts campaign against drug abuse and plastic use



The students of St Albert's College (Autonomous) conducted a campaign programme against the plastic use and drug abuse at Cheranalloor panchayat on March 22. As a part of it, 40 metres of a wall on the Container Road were painted by the students of botany

and mathematics departments of St Albert's College. The drawn picture were giving messages against the use of plastic and drugs. As many as 37 students and two teachers participated in the event. Councillor Shimmy Francis and people of Ward 2 gave all support for the campaign.





5. RESEARCH ACTIVITIES

RESEARCH @ BOTANY



Details of Research Students of Botany Department

Name of the Ph.D. Student	Name of the Research Guide	Nature of Research	Topic of Research
Tintu Tomy	J Jameson	U.O. No.7559/4/2017 /Academic/AII89 /2017 Full Time	Ecological Characterization of Certain Rivers of Kerala with Special Emphasis on Heavy Metals and Pharamaceutical Pollution
Ajeesh Joseph	J Jameson	U.O. No.7559/4/2017/ Academic/AII92/ 2017 Part Time	Biochemical and physiological characterization of resistance and susceptibility to stem borer (<i>Odioporus longicollis</i>) in selected genotypes of banana and determination of genetic factors responsible for the resistance.
Arjun Thomas	J Jameson	U.O. No.8664/4/2018 Acad./All dt. 12-12-18 Full time	Ecology and Diversity of Vascular Epiphytes in Tropical Montane Cloud forest of Southern Western Ghats, Kerala , India.

Mary Joseph	Dr. L Jose	2014 Part time	Phytochemical and Micromorphoanatomical Characterization of sub – family Epidendroideae: Orchidaceae of Ernakulam and Idukki Districts, Kerala , India.
Drishya K. Reghuvan	Dr. L Jose	2014 Part time	A Floristic Study on the freshwater Diatom Flora of Ernakulam District, Kerala, India
Shahina N.K.	Dr. K. Madhusudhanan	2014 Full time THESIS SUBMITTED	Ethnomedicinal and Ecological Studies of Wild Edible Mushrooms Used by Selected Tribes in Palakkad and Wayanad districts of Kerala
Jayesh K.	Dr. K. Madhusudhanan	2014- Part time	Identification, Domestication, Genetic Improvement and Bio prospecting of Wild Edible Mushroom of Kerala
Abi P K	Dr. K. Madhusudhanan	2015 Part time	Phytochemical Analysis of <i>Melastoma malabaricum</i> L. & <i>Memecylon malabaricum</i> Cogn. and Potential Utilization of their Charcoal Against Pollutants from Aqueous Medium
Javad P.	-	Project Fellow	Taxonomy and Molecular Phylogeny of the genus <i>Heliotropium</i> L. (Boraginaceae) in India

To be the First PhD awarded from the Department of Botany

Ms. Shahina NK, Research Scholar under the guidance of Dr. K. Madhusudhanan presented her Pre Ph.D. Synopsis



Research Advisory Meeting & Half Yearly Presentations of Research Report



**ALBERTIAN KNOWLEDGE SUMMIT (AKS) 2019: 14th
January, 2019**



CARING PLANTS

CARING LIVES



The Albertian Knowledge Summit of 2019 took place as a one-day International Seminar in the Department of Botany. The title of the Seminar was "Recent Trends in Plant Sciences" and the conveners were Dr. K Madhusudhanan and Dr. Anisha S. The conference had participants not only from the nearby colleges but also from other parts of the state. There were three resource persons with expertise in Taxonomy, lower plants and metabolic engineering respectively. Apart from the invited talks, researchers and PG students also presented their work as oral papers and posters. There were 16 oral papers and 10 poster presentations. A total of 67 participants took part which included faculty members, researchers, and students.

Ongoing External Agency Funded Projects

➤ **Dr. K. Madhusudhanan**

Nutritional and Biochemical Studies of Wild Edible Mushrooms used by Tribes of Palghat and Wayanad Districts of Kerala.

Agency: KSCSTE Back to Lab (3 years – completed in Dec. 2018)

- Project Scholar- Ms. Shahina, NK

➤ **Dr. Anna Ancy Antony: (Early Career Research Award)**

Taxonomy and Molecular phylogeny of the genus *Heliotropium* L. (Boraginaceae) in India , Agency : SERB (3 years)

➤ **Dr. Anisha S.**

"Isolation and therapeutic characterization of lactoferrin peptides". Agency : KSCSTE (2 years: 2018-2020)

INDEPENDENT RESEARCH GROUPS

❖ **Algal Research Group**

❖ **Mycological Research Group**

❖ **Taxonomy Research Group**

M.Sc. Botany Dissertations Submitted for the year 2018-19

SL. NO.	NAME OF THE STUDENT	REG.NO.	PROJECT TITLE	NAME OF SUPERVISING TEACHER
1	AGHILA SAMJI	1702050001	A comparative study on the presence of selected heavy metals ,physico-chemical characters & algal flora of protected (Mangalavanam) & unprotected (Mulavukadu) mangrove ecosystem in Ernakulam District , Kerala.	Dr. J Jameson
2	ALEENA K J	1702050002	Isolation and identification of a melanin producing bacteria from soil	Dr.Siju M Varghese
3	ANJU MERLINE JUDE	1702050003	Effect of silicon in mitigating salt stress in Groundnut during germination	Dr.Anisha S
4	BINILA BENNY	1702050004	Morphoanatomical and Phytochemical studies on <i>Bulbophyllumsterile</i> (Lam.) Suresh	Mary Joseph
5	CARMELY VIGI.K.V	1702050005	A comparative study on anatomy of some exotic orchids	Dr. L Jose
6	JILU JOHN	1702050006	Studies on <i>Cordiacylindrostachya</i> (Ruiz&Pav) Roem.&Schltz. and	Dr.AnnaAncy Antony

			<i>Heliotropium indicum</i> L. of the family boraginaceae	
7	LEETHIYA P G	1702050007	Screening, synthesis and characterization of silver nanoparticles from different plant extracts	Drishya K Reghuvaran
8	NAMITHA ANTONY	1702050008	Qualitative and quantitative analysis of phytochemicals of <i>Osbeckiachinensis</i> and their anti-oxidant assay	Dr. K Madhusudhanan
9	ROSEMARY MATHEW	1702050009	A comparative study on the presence of selected heavy metals, physico-chemical characters & algal flora of protected (Mangalavanam) & unprotected (Kadamakudy) mangrove ecosystem in Ernakulam District , Kerala	Dr. J Jameson
10	SANDRA MARTIN	1702050010	A comparative study on anatomy of some exotic orchids	Dr. L Jose
11	SNEHA ANTONY	1702050011	Isolation and identification of protease producing bacteria from soil	Dr.Siju M Varghese
12	SOUMINI SAJEEV	1702050012	Synthesis and characterization of silver nanoparticle using bark and root	Drishya K Reghuvaran

			extract of <i>Cerberaodollam</i>	
13	VISHNUPRIYA T T	1702050013	Phytochemical investigation of <i>Memecylonedule</i> (Roxb.) and determination of anti-oxidant activity	Dr. K Madhusudhanan

Research Publication 2018

Name of the Faculty	Journal Article / Book published
Dr. L Jose	Morphological and anatomical studies in <i>Oberonitenuis</i> Lindl. Journal of Orchid Society of India 2018
Dr K Madhusudhanan	1. Hierarchical clustering of wild edible mushrooms used by tribes based on ecological characteristics. Indian Journal of Ecology,2018 2. In vitro cytotoxicity assay of selected wild edible mushrooms against Dalton's lymphoma ascites (dla) cells. Indian Journal of Scientific Research, 2018
Smt. Mary Joseph	Comparative phytochemical screening of four epidendroid orchids of Kerala, India. Journal of Orchid Society of India 2018
Dr.Anisha S	An <i>In Vitro</i> System for Studying the Effect of Salt Stress in Groundnut (<i>Arachishypogaea</i> L.) Current Biotechnology 2018

7. SPECIAL PROGRAMMES

Buddy Learning System: The buddy system is a procedure in which two individuals, the "buddies", operate together as a single unit so that they are able to monitor and help each other. As per Merriam-Webster, the first known use of the phrase "buddy system" goes as far back as 1942. Webster goes on to define the buddy system as "an arrangement in which two individuals are paired (as for mutual safety in a hazardous situation)." The buddy system is basically working together in pairs in a large group or alone. Both the individuals have to do the job. The job could be to ensure that the work is finished safely or the skill/learning is transferred effectively from one individual to the other.

Group Learning: A collection of persons who are emotionally, intellectually, and aesthetically engaged in solving problems, creating products, and making meaning—an assemblage in which each person learns autonomously and through the ways of learning of others.



Blended Learning: Blended learning is a term increasingly used to describe the way-learning is being combined with traditional classroom methods and independent study to create a new, hybrid teaching methodology. It represents a much greater change in basic technique than simply adding computers to classrooms; it represents, in many cases, a fundamental change in the way teachers and students approach the learning experience. It has already produced an offshoot – the flipped classroom – that has quickly become a distinct approach of its own



Each one teach one: The department incorporates the "each one, teach one" principle by having each student act as a mentor to successive students in academic subjects and activities varying from Biochemistry to singing and dancing.



10 minutes presentation: The students give a 10 minute powerpoint presentation on their JIR to the faculty and students in the Department, which is followed by 5 minutes of question-answering session.



The presentation must have high quality illustrations of the results (must be readable by audience) that succinctly convey the major points of the independent work. Students are encouraged to consult with their Research Advisor to get help on the organization of research findings and in preparing the summary for the presentation. The students are also encouraged to give practice presentations to their friends or to

their Research Advisor for comments on the presentation style and content.

Field and Lab oriented assistance: Students were empowered with hands on training on various laboratory exercises and experiments. They have been assisted during specimen collection and also taught on the need to adopt a conservation oriented collection and discouraged on excessive material collection and give awareness on the need preserve biological diversity for future generation.



Additional training on Botanical drawings: Emphasis has been entrusted in the drawing of botany diagrams in terms of its scientific nature and labeling with proportionate dimensions. Individual attention to students during their drawing in practical session, correction of observation book and final record diagrams were attended.



Know your plant today initiative (Tharumahima): A team of two students collect one plant and exhibits its parts in live form as well as present the botanical descriptions, uses in chart papers. In this exercise the students also introduce one botany term for the day with its description or definition. The details of the plants exhibited are entered into the register book kept in the department.

