

**RESEARCH DEPARTMENT OF FISHERIES AND AQUACULTURE
ST.ALBERT'S COLLEGE (AUTONOMOUS), ERNAKULAM**



YEAR BOOK 2019-2020



NOVEMBER 2020

<https://www.alberts.edu.in/departments-of-fisheries-aquaculture/>

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Edition : November 2020

HOD'S MESSAGE

The institution recognized the significance of the commencement of fisheries related courses in 1995 considering the proximity of the institution with the Vembanad Lake and the Arabian Sea and also taking into consideration the fact that Cochin is hub of fisheries with the Head Quarters of a number of Central and State Government organizations in the propinquity as well as the high prevalence of aquaculture related activities in the region. With the offset of two degree programmes in concurrent years the department made a mark in the academia as the only department having two degree programmes in fisheries under Mahatma Gandhi University. Initiating the post graduate programme in 2002, the department made clear its aim in moving towards research. The department gained international acclaim in 2012 through its recognition as one among the 10 Best Colleges in the World promoting conservation research. In the same year the department showed the way to the State of Kerala in establishing world renowned technologies by introducing the concept of Aquaponics through an International Internship. The recognition of the two UG and one PG programme by the Public Service Commission of Kerala was another feather in the cap of the department. The alumnus of the department has made proud by securing positions in the academic field and other organizations in the Central, State and Private Sectors. Providing quality education to the students, the department has ensured a sustained learning outcome through the results. The department is committed to provide the best opportunities and facilities to the students through its collaborations and MOU's with several Central Government and Private Organizations and academic institutions. The dedication and commitment of the faculty has resulted in research publications in international peer reviewed journals and guide the students towards pursuing scientific research. Research Department of Fisheries and Aquaculture is surging ahead in the path of change and innovation with its recognition as Research Center and the commencement of two new B.Voc. Programmes, taking into consideration the fact that the aquaculture and processing sector in the state is at a high pace of growth and the need to cater skilled personnel to the sector in anticipation of future developments.

Asst. Prof. Jose Emmanuel L.A.

HOD-in-Charge Research Department of Fisheries and Aquaculture (SF)

Dr. Ajith Thomas John

HOD Research Department of Fisheries and Aquaculture

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1 DEPARTMENT CHRONICLE

The Post Graduate Department of Fisheries and Aquaculture is one of the largest and the most dynamic departments in the college with a student strength of 228 after 2019 Admission. It offers two professional courses B.Sc. Aquaculture and B.Sc. Industrial Fish & Fisheries and the post-graduate programme in M.Sc. Applied Fisheries and Aquaculture. BSc. Aquaculture first started as an affiliated course in the year 1995 as a part of Department of Zoology by the special interest of Dr. P.R.Venkitaraman, Head of the Department of Zoology. In 1996 B.Sc. Industrial Fish and Fisheries commenced as a University Grants Commission sponsored course for a period of 5 years. After the five year term the course continued as a self-financing course from 2001, becoming the first self financing course of the college. Department became independent in the year 1999 with the appointment 5 faculty members (4 in Aquaculture (Dr. Ajith Thomas John, Mr. Bijoy V.M., Dr. G. Prasad and Dr. Harikrishnan M.) and 1 in Biochemistry (Dr. Balu K. Chacko). The Post Graduate course in M.Sc. Applied Fisheries and Aquaculture started in the year 2002. In 2003 Dr. Balu K. Chacko, left the department to join the University of Alabama. The department known as the Department of Aquaculture and Biochemistry, then separated from its mother department of Zoology and shifted to the Annexe building housing the College Canteen in the year 2004. Dr. Ajith Thomas John was appointed as the first Head of the Department. In the same year the Aquaculture and Fisheries Association was formed with all the faculty and students as members. Dr. G. Prasad left the department in 2004 to join the Department of Zoology, University of Kerala and Dr. F.G. Benno Pereira joined as permanent faculty in the same year. In 2006 one of the most unique programmes of the college the "Harvest Festival" started at the Fish/Shrimp Farm at Pizhala, Kadamakkudy. Dr. F.G. Benno Periera took charge as Head of the Department in 2007 and in the same year the Conservation Research Group was formed. In the same year Dr. Harikrishnan M. Left the department to join the School of Industrial Fisheries, Cochin University of



Science and Technology. In 2011 the department was renamed as the Department of Fisheries and Aquaculture by the Mahatma Gandhi University. In 2012, the department was also one among five science departments in the college to be awarded financial support under the DBT Star College Scheme of which Dr. Ajith Thomas John of the department was the Coordinator for the college. In June 2012, the department hosted and organized the first International Internship of the college for the students of the University of Wisconsin, Madison, USA on "Empowerment through Aquaponics". In September 2012, St.Albert's College, Kochi was selected as among 10 Best Colleges in the World working to conserve endangered species as a recognition of the contributions of the Conservation Research Group. Sri.Ginson Joseph was appointed as permanent faculty in Aquaculture on 17/10/2013. Dr. Vibin M. was appointed as permanent faculty in Biochemistry on 08/11/2013. On April 1st 2016 Dr. Ajith Thomas John was selected as the IQAC Coordinator of the college. On 16th March 2015 Sri.Ginson Joseph was awarded Ph.D. by Cochin University. In January 2016 the Department was recognized as Research Center by the Mahatma Gandhi University and became the first to be recognized as a Research Center under the University in the field of Fisheries Science. In September 2016 Asst. Prof. Jose Emmanuel took charge as Head of Department. On 17th May 2017 Sri. Bijoy V.M. was awarded Ph.D. by Cochin University. In June 2017 Dr. Jinson Joseph, won the Jawaharlal Nehru Award for Best Outstanding Thesis. In April 2018, Dr. Ajith Thomas John took charge as Head of Department. On 29th July 2019 the University Grants Commission approved the new B.Voc. Degree Programme on Commercial Aquaculture for the department. On 3th August 2019 Kerala University of Fisheries and Ocean Studies recognized four faculty members Dr. Ajith Thomas John, Dr. Bijoy. V.M., Dr. Ginson Joseph and Dr. Vibin M. as Research Guides of KUFOS under the Faculty of Ocean Science and Technology.



2 YEAR HIGHLIGHTS

- NATIONAL SEMINAR - 3
- REGIONAL SEMINAR - 3
- INTERNATIONAL TALK - 1
- SOCIAL OUTREACH ACTIVITIES - 5
- STUDENT TRAINING - 4
- MoU SIGNED - 2
- DEPARTMENT MEETING - 9
- BOARD OF STUDIES MEETING - 2
- REVISED SYLLABUS IMPLEMENTED FOR B.Sc. AQUACULTURE PROGRAMME FROM 2019-2020.
- REVISED SYLLABUS IMPLEMENTED FOR B.Sc. INDUSTRIAL FISH AND FISHERIES AND CHANGE IN NAME TO B.SC. INDUSTRIAL FISHERIES FROM 2019-2020.
- REVISED SYLLABUS IMPLEMENTED FOR M.Sc. APPLIED FISHERIES AND AQUACULTURE FROM 2019-2020
- INTRODUCED TWO CERTIFICATE PROGRAMMES PROPOSED TO BE OFFERED FROM 2019-2020
 - a. CERTIFICATE PROGRAMME IN AQUAPONIC RECIRCULATORY AQUACULTURE SYSTEMS
 - b. CERTIFICATE PROGRAMME IN AQUARIUM KEEPING AND ORNAMENTAL FISH REARING
- DRAFTED AND APPROVED THE SYLLABUS FOR THE NEW B.Voc. DEGREE PROGRAMME ON COMMERCIAL AQUACULTURE SANCTIONED BY THE UGC.



3 FACULTY



Dr. Ajith Thomas John, HOD
Research Department of Fisheries and Aquaculture (R)
Chairman Board of Studies in Fisheries and Aquaculture



Sri. Jose Emmanuel
Assistant Professor & HOD

Research Department of Fisheries and Aquaculture (SF)



Dr. Bijoy V.M.
Assistant Professor (Grade III)



Dr. Ginson Joseph
Assistant Professor (Gr. II)



Dr. Vibin M.
Assistant Professor (Gr. II)



Sri. Sivakumar G.
Assistant Professor



Sri. Sayeed Mohamed
Assistant Professor



Smt. Sislave K.S.
Assistant Professor



Smt. Preethi Francis
Assistant Professor



Smt. Bisi K. Paul
Assistant Professor



Smt. Sameera Shamsudheen
Assistant Professor



Dr.Jithu Paul Jacob
Assistant Professor



Smt. Freeda Rebecca Bastian
Assistant Professor (Govt. Guest)



Smt. Nilanjana Mariya Verghese
Assistant Professor



Mr.M.F. Joseph
Lab Assistant



Smt.Mercy K.A.
Lab Assistant

**4 BOARD OF STUDIES IN FISHERIES & AQUACULTURE**

Sl.No:	Name	Designation	Qualification
a) Chairman: <i>(Head of the Department concerned)</i>			
1	Dr. Ajith Thomas John	Assistant Professor in Aquaculture (Gr.III)	M.Sc., Ph.D.
b) Teachers: <i>(The entire faculty of each specialization)</i>			
1	Dr. Bijoy V.M.	Assistant Professor in Aquaculture (Gr.III)	M.Sc., Ph.D., NET
2	Dr. Ginson Joseph	Assistant Professor in Aquaculture(Gr.II)	M.Sc., Ph.D., NET
3	Dr. Vibin M	Assistant Professor in Biochemistry(Gr.II)	M.Sc., Ph.D.
4	Sri. Jose Emmanuel L.A.	Assistant Professor	M.Sc., M.Phil.
5	Sri. Sayeed Mohamed P.K.	Assistant Professor	M.Sc., NET
6	Sri. Sivakumar G.	Assistant Professor	M.Sc.
7	Smt. Preethi Francis	Assistant Professor	M.Sc.
8	Smt. Sislave K.S.	Assistant Professor	M.Sc.
9	Smt. Bisi K Paul	Assistant Professor in Biochemistry	M.Sc.
10	Smt. Sameera Shamsudheen	Assistant Professor	M.Sc., M.Phil., NET
11	Sri. Jithu Paul Jacob	Assistant Professor	M.Sc., M.Phil.
12	Smt. Freeda Rebecca Bastian	Assistant Professor	M.Sc., M.Phil., NET
c) Two Subject Experts: <i>(From outside the Parent University to be nominated by the Academic Council)</i>			
1	Dr. Anneykkutty Joseph School of Marine Sciences, Cochin University of Science & Technology, Lakeside Campus,Cochin – 16	Professor & Director	M.F.Sc., Ph.D.
2	Dr. M. Harikrishnan School of Industrial Fisheries, Cochin University of Science and Technology, Lakeside Campus,Cochin-16	Professor & Director	M.Sc., Ph.D.




d) Nominee of Vice Chancellor: <i>(one expert to be nominated by the Vice-Chancellor from a panel of six experts recommended by the Principal)</i>			
1	Dr. Bijoy Nandan S., Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science & Technology -Lakeside Campus, Cochin – 682 016	Professor & Head	M.Sc., Ph.D.
e) Placement Representative: <i>(One representative from industry/corporate sector/allied area relating to placement)</i>			
1	Mr.Jaisingh Joseph J.S. Global Trading 68/2249 B1 K.K. Padmanabhan Road Powerhouse Jn. Cochin 682 018 Kerala. India.	Managing Director	M.Sc.
f) Meritorious alumnus: <i>(One postgraduate meritorious alumnus to be nominated by the Principal)</i>			
1	Dr. Vikas P.A. ICAR-KVK Ernakulam of CMFRI Njarakkal, Ernakulam	Subject-matter Specialist (Fisheries)	M.Sc., Ph.D.
g) The Chairman, Board of Studies, may with the approval of the Principal of the college, co-opt:			
a) Co-opted Special Experts from outside <i>(Experts from outside the college whenever special courses of studies are to be formulated):</i>			
1	Dr. George Ninan Principal Scientist, CIFT, Kochi – 682029. Kerala. India.	Principal Scientist	M.Sc., Ph.D.
2	Dr. Kesavan K. Head of the Department, Department of Aquaculture, MES Asmabi College, P. Vemballoor, Kodungalloor – 680671	Assistant Professor	M.Sc., Ph.D.
3	Mr. Zubair A.A. Assistant Professor Department of Aquaculture, MES Ponnani College, Ponnani.	Assistant Professor	M.Sc.



5 COURSES OFFERED

UNDER GRADUATE PROGRAMMES

-  **B.Sc. Aquaculture**
-  **B.Sc. Industrial Fish and Fisheries**
-  **B.Voc. Commercial Aquaculture**

B.Sc. AQUACULTURE

PROGRAM OUTCOME

The program is designed to develop skilled aquaculture technicians with a broad background in the practical and academic skills of finfish and shellfish biology, fish and shrimp pond management, water and soil quality management, finfish, shellfish and invertebrate culture, environmental impact assessment, habitat and stock monitoring, wild stock management, aquaculture business management and planning.

Specifically, the graduates will be adept in a number of transferable, analytical and communication skills including :

- The ability to demonstrate sound understanding related to biology, breeding, genetics and nutrition of various cultivable organisms.
- Acquired sufficient skills and knowledge in aquaculture reproduction, hatchery management and applied genetics.
- Design culture systems of different perspectives and actively solve engineering issues in aquaculture.
- Ability to diagnose aquaculture related diseases and manage health and safety issues in aquaculture ventures.
- Employ scientific techniques, practical skills and management strategies aimed at improving culture resource management.
- Expertise in handling various instruments and technical aspects related to water/soil quality assessment thus resulting in solving issues in connection with quality management in culture systems.
- Skilled to analyse the quality assessment and post-harvest technology to manage live fish and fishery products.
- Exploit and utilize wisely fisheries resources using appropriate and innovative fishing methods.
- Apply post-harvest practices that are compliant to international standards for food safety and quality.
- Engage effectively in biochemical analyses which are relevant in culture industry.



- Understand and interpret critical scientific and ethical issues related to culture ecosystems and recommend conservatory measures to manage a balanced aquaculture ecosystem.
- Demonstrate research skills and scientific methodologies for further studies, research and employment.
- Gained noesis in fields allied to aquaculture economics and extension and engage in activities which will result in sustainable culture production and dissemination of knowledge to the society.

In addition the students will have the ability to

- Retrieve and present scientific information, including communicating effectively with a variety of audiences in written and spoken form as well as digital format.
- Understand and apply relevant scientific principles and work effectively, cooperatively and productively within a team
- Critically analyse and evaluate data in aquaculture disciplines and creatively solve practical problems

The entrepreneurial skills of the students are enabled through the different training sessions and they will have the capacity to develop, operate and manage aquaculture production systems through self entrepreneurship.

PROGRAM SPECIFIC OUTCOME

After completion of the B.Sc. Aquaculture program the students would have attained the following specific skills

- Manage and maintain and aquaculture system on their own, either as an employee or at the level of an entrepreneur.
- Design, install/establish different concepts of aquaculture practices on technologically sound principles.
- Skilled to propagate environment friendly and ecologically sustainable aquaculture practices.
- Apply the principles of economics to ensure profitability of own business / that of a business enterprise.
- Create awareness among the masses through extension activities regarding the need for popularizing the concepts of aquaculture.



B.Sc. INDUSTRIAL FISH & FISHERIES

PROGRAM OUTCOME

The program is designed to develop skilled technicians in fisheries science with a broad background in the practical and academic skills of finfish and shellfish biology, fish and shrimp pond management, water and soil quality management, finfish, shellfish and invertebrate culture, environmental impact assessment, habitat and stock monitoring, wild stock management, fisheries business management and planning. The well-structured syllabus will make the students versatile and enable them to rightly fit into an array of facets like ornamental fisheries, processing sector, fish capture industry, culture sector and the field of research & development.

Specifically, the graduates will be adept in a number of transferable, analytical and communication skills including :

- The ability to demonstrate sound understanding related to biology, breeding, genetics and nutrition of various cultivable organisms.
- Acquired sufficient skills and knowledge in aquaculture reproduction, hatchery management and applied genetics.
- Gained sufficient knowledge on applying the adaptive management strategies to protect the endemic freshwater and brackishwater fishery resources
- Ability to diagnose aquaculture related diseases and manage health and safety issues in aquaculture ventures.
- Employ scientific techniques, practical skills and management strategies aimed at improving culture resource management.
- Expertise in handling various instruments and technical aspects related to water/soil quality assessment thus resulting in solving issues in connection with quality management in culture systems.
- Skilled to analyse the quality assessment and post-harvest technology to manage live fish and fishery products.
- Exploit and utilize wisely fisheries resources using appropriate and innovative fishing methods
- Apply post-harvest practices that are compliant to international standards for food safety and quality
- Engage effectively in biochemical analyses which are relevant in culture industry.
- Understand and interpret critical scientific and ethical issues related to culture ecosystems and recommend conservatory measures to manage a balanced aquaculture ecosystem.
- Demonstrate research skills and scientific methodologies for further studies, research and employment.



- Gained noesis in fields allied to fisheries economics and extension and engage in activities which will result in sustainable production systems and dissemination of knowledge to the society.
- Have a strong hold in the concepts of management & marketing and develop the capacity to produce innovative ideas & tactical skills required for an entrepreneurial career.

In addition the students will have the ability to

- Retrieve and present scientific information, including communicating effectively with a variety of audiences in written and spoken form as well as digital format.
- Understand and apply relevant scientific principles and work effectively, cooperatively and productively within a team.
- Critically analyse and evaluate data in fisheries science and creatively solve practical problems.

The entrepreneurial skills of the students are enabled through the different training sessions and they will have the capacity to develop, operate and manage a fishery related business through self entrepreneurship. As the course is more processing industry oriented the students will possess the essential skills required to cater the seafood processing sector.

PROGRAM SPECIFIC OUTCOME

On completion of the B.Sc. Industrial Fish & Fisheries program the students would be skilled in the following specific areas

- Become adept in the concepts of capture, culture and management of fisheries making oneself suitable employment in both the public and private sector.
- Identify and formulate technically sound, economically feasible and socially relevant fishery related projects.
- In depth knowhow of the fishery products and by-products technology to venture into self entrepreneurship.
- Proficient in various aspects of quality control and quality assurance of seafood products enhancing the employability potential in the seafood industry.
- Apply the principles of economics and marketing along with the attained entrepreneurship skills to own business ventures.



B.Voc. COMMERCIAL AQUACULTURE

PROGRAM OUTCOME

The program is designed to develop entrepreneurially oriented aquaculture graduates with an in depth expertise in the pragmatic and academic skills related to aquatic ecology and fishery biology, freshwater aquaculture, backishwater aquaculture, mariculture, culture of ornamental fishes, technological aspects of fish capture, hatchery technology, aquaculture nutrition, soil and water quality management, microbiology and fish pathology, processing technology and value addition, aquaculture engineering and biotechnology, aquaculture entrepreneurship and development planning.

Specifically, the graduates will be adept in a number of transferable, analytical and communication skills including :

- Understand and interpret critical scientific and ethical issues related to culture ecosystems and recommend conservatory measures to manage a balanced aquaculture ecosystem.
- Demonstrable abilities related to fish biology, ecology and chemical interactions of the aquatic environment.
- Practical knowledge on pond preparation, monitoring and handling of farm equipments.
- Skills and knowledge in the culture of freshwater aquatic organisms and hatchery technology.
- Knowledge on apt techniques for exploitation of fisheries resources adopting appropriate and innovative methods.
- Practical expertise in Breeding, Larval Rearing, Feed Management and Seed Management in hatcheries.
- Technically sound in handling various instruments and aspects related to water/soil quality assessment.
- Adopt strategies for sustainable aquaculture implementing the principles of FAO Code of Conduct on Responsible Fisheries.
- Suggest nutritional standards towards economically viable culture practices.
- Practical skills on computer based statistical analyses of aquaculture and fisheries data.
- Gained expertise in water and soil sampling methods & quality parameter measurements, conventional and artificial feeds and feeding strategies in farms.
- Knowledge on biotechnological applications in aquaculture aimed at enhanced productions levels.
- Skilled to apply post-harvest practices and assess the quality standards to manage live fish and fishery products.



- Employ scientific techniques, practical skills and management strategies aimed at improving brackishwater culture and ornamental fish culture practices.
- Ability to diagnose aquaculture related diseases and manage health and safety issues in aquaculture ventures.
- Adopt and suggest suitable scientifically proven methods for sea farming of aquatic organisms.
- Design culture systems of different perspectives and actively solve engineering issues in aquaculture.
- Demonstrate technically adoptable methodologies for fish marketing, fisheries governance and apply socio-economic principles for sustenance of fisheries and aquaculture.

In addition the students will have the ability to

- Retrieve and present scientific information, including communicating effectively with a variety of audiences in written and spoken form as well as digital format.
- Understand and apply relevant scientific principles and work effectively, cooperatively and productively within a team
- Critically analyse and evaluate data in aquaculture disciplines and creatively solve practical problems

The entrepreneurial skills of the students are enabled through the on Job Training and Internship sessions arranged semester-wise and they will have the ability to develop, operate and manage aquaculture production systems through entrepreneurship.

PROGRAM SPECIFIC OUTCOME

The B.Voc. programme is designed to have multiple exit points. On successful completion of year one, a candidate has the liberty to leave the programme with a Diploma Certificate. Likewise completion year two and year three will enable the candidate to secure an Advanced Diploma and B.Voc. Degree respectively. After completion of the B.Voc. Commercial Aquaculture program the students would have attained the following specific skills.

- Ability to manage and maintain an aquaculture system on their own, either as an employee or at the level of an entrepreneur.
- Design, install/establish different scientifically proven concepts of aquaculture practices based on technologically sound principles.



- Skilled to propagate environment friendly and ecologically sustainable aquaculture practices.
- Apply socially relevant principles of economics to ensure profitability of own business / that of a business enterprise.

Expertise in creating awareness among the masses through extension activities aimed at popularizing the concepts of aquaculture.

POST GRADUATE PROGRAMME

M.Sc. APPLIED FISHERIES & AQUACULTURE

PROGRAM OUTCOME

The programme is designed to mould highly skilled fisheries and aquaculture technicians having a thorough understanding of the core areas of the subject including skills related to taxonomic identification, chemical analyses, applied computing, aquarium fisheries management, health management in aquaculture, biotechnological applications, capture and culture technology management, resource conservation management and post harvest technology management.

In addition the students attain the following

- Specialized knowledge in a range of current issues, including growth, nutrition, health and disease resistance, genetics and environmental interactions.
- Practical experience in aquarium construction, maintenance and breeding and rearing of ornamental fishes.
- Quantitative skills such as statistical applications and digital technological applications, making themselves efficient for prospective employers.
- Essential research skills including project planning, literature reviewing, data analysis and interpretation which will be beneficial for future research career.
- Knowledge and skills required to assess the abundance and distribution of fish and to understand key elements of the provision of advice for fisheries management.



- Thorough understanding of the physical and biological oceanography, biodiversity, trophic interactions, species survival and reproduction issues required to implement spatially explicit, sustainable ecosystem-base management, conservation and effective marine spatial planning.
- Reflect current theory and practice in the interface between ecology, conservation and society explored through structured social outreach program during the course and they will be able to address these issues in different perspectives.
- Generated sufficient abilities and skills to generate hypotheses and design ways of testing them and to analyse, report and discuss the findings of their projects.
- Take responsibility for implementing their own plans and modifying them as needed based on geographical and environmental requirements.

On successful completion of the programme the student will be fully competent to pursue a career through self entrepreneurship, research, as an employee in a central, state, private or non-governmental organization.

PROGRAM SPECIFIC OUTCOME

On completion of the two year post graduate program in Applied Fisheries and Aquaculture a student will have attained the following unique skill sets.

- Quantitative and analytical aptitude to apply the statistical and computational skills to project planning, research and data management.
- In depth knowledge in specific areas such as biotechnological applications in aquaculture for ethically sustainable enhancement of production.
- Practical skills in fish and shrimp nutrition and health management in aquaculture farms to assist scientifically managed farms.
- Entrepreneurial skill attainment in breeding and hatchery management of aquarium fishes and food fishes.
- High employability potential in the processing industry due to the skill sets attained in post harvest technology.
- Applicable knowledge in farming of marine organisms to enable sustained availability of essential marine life for commercial utilization.



- Skilled in areas of harvesting technology to apply the technical advancements suitably as well as to create awareness among the fishermen community of the need for ecosystem conservation and sustainable exploitation.

PROPOSED CERTIFICATE PROGRAMMES FOR 2019-2020

1. AQUARIUM KEEPING & ORNAMENTAL FISH REARING

PROGRAM OBJECTIVES

- ✓ To inculcate importance of ornamental fish farming in relation with entrepreneurship development.
- ✓ To give people knowledge about various techniques of ornamental fish breeding, rearing and it's marketing to make them self-sustainable.
- ✓ To teach techniques of construction of glass aquarium and its maintenance
- ✓ To teach peoples about fish food production and health related problems with ornamental fish.
- ✓ To understand status and the importance of ornamental industry.

PROGRAM OVERVIEW

The program will be spread over six months with 75hours allotted for Theory Papers and 90hours for practical sessions, summing up to 165hours for the whole program. Total credits for the programme will be 8. The theory and practical sessions are spread over 20weeks. Three days in a week will be theory and two days practical sessions. On each working day at the institution theory sessions will be allotted 2 hours and practical sessions will be allotted 2hours. Assessment will be based on theory, practical examinations and student presentations.

PROGRAM OUTCOME

- ✓ Apply information and practical experience in aquarium decoration;
- ✓ Adept in the management, development, breeding and rearing of ornamental fish.
- ✓ The ornamental fish industry is highly lucrative industry and more skilled personnel confident to be an entrepreneur will be one of the most important outcomes.

Total Student Intake : 30



Eligibility : Plus 2 Pass with Biology as a subject of study

Scheme

Course Code	Course	Credits
AQRT01	Aquaculture	1
AQRT02	Ornamental fishes and Plants	1
AQRT03	Construction and maintenance of Aquarium	1
AQRT04	Breeding and larval rearing	1
AQRT05	Fish feed and health management	1
AQRPR01	Fish and Plant identification and fish breeding	1
AQRPR02	Construction of aquarium and maintenance	1
AQRPR03	Water quality parameters, Feed preparation and health management	1

2 AQUAPONIC RECIRCULATORY AQUACULTURE SYSTEMS

Program Objectives

- ✚ To introduce the concepts of aquaculture, hydroponics and recirculatory aquaculture systems.
- ✚ To generate a clear understanding of the integration of components through practical training.
- ✚ To skill the students to design, install and maintain any location specific aquaponics system.
- ✚ To be adept in RAS technology and economics of operation of aquaponics systems.

Program Overview

The program will be spread over six months with 80hours allotted for Theory Papers and 80hours for practical sessions, summing up to 160hours for the whole program. Total credits for the programme will be 8. The theory and practical sessions are spread over 20weeks. Four days in a week will be theory and practical sessions and on the fifth day the Trainees will be taken for visits to Farms, Hatcheries, Research Institutions, Fishing Harbours, Hydroponic, Aquaponic installations, RAS intallations etc. Theory will be taught on two days with two hours on each day and the practical sessions on the remaining two



days will be allotted 2 hours on each day. Assessment will be based on theory, practical examinations, student presentations and at the end of the program, students are required to design and demonstrate a prototype aquaponics system to exhibit the skills acquired.

Program Outcome

On successful completion of the program the students will have attained sufficient knowledge to work in the industry for Aquaponic, Hydroponic and Recirculatory Aquaculture System installations and gained self confidence for entrepreneurship in these fields.

Total Student Intake : 30

Eligibility : Plus 2 Pass with Biology as a subject of study

Scheme

Course Code	Course	Credits
AQPT01	Aquaculture	1
AQPT02	Hydroponics	1
AQPT03	Aquariculture	1
AQPT04	RAS Design Concepts	1
AQPT05	RAS Installation and Maintenance	1
AQPPR01	Aquaponics System Design, Installation and Maintenance	1
AQPPN01	Presentation for each Theory Course	1
AQPPS01	Prototype Setting	1
	Total	8



6 DEPARTMENT FACILITIES

The facilities of the department include a spacious **Staff Room** and **Class Rooms** to accommodate students of each year in the two degree programmes and the post graduate programme. In addition the department has a **1ha Farm** for demonstrating pond management studies, culture of fishes and shrimps as well as monitoring of water and soil quality parameters. **Entrepreneurship Skill Development Center** for breeding and rearing of aquarium fishes and plants. **Aquaculture Lab** for morphometric and anatomical studies of finfishes and shellfishes as well as analytical studies of fish pond water and soil. The 50 seater Aquaculture lab also serves as **Lab for Fish Processing Technology** and as a **Lab for Fishing Gear Technology**. **Microbiology Lab** for isolation and identification of bacterial strains and Biochemistry lab for biochemical studies on fish samples. In addition the department has an **Instrumentation Room** housing stereo zoom microscope and computer and a **Museum** preserving samples of different species of fishes, shrimps, mollusks, cephalopods, seaweeds etc. **Biochemistry Lab** for biochemical analytical studies for practical as well as student project works.

**7 ADMISSION DATA**

Programme	No. of Applications Received	Sanctioned Strength	No. of Students Admitted	Male	Female	Year
B.Sc. Aquaculture	1487	30	30	8	22	2016-17
B.Sc. Aquaculture	1878	30	29	4	25	2017-18
B.Sc. Aquaculture	2410	30	29	4	25	2018-19
B.Sc. Aquaculture	2124	24	26	10	16	2019-20
B.Sc. Industrial Fish and Fisheries	1223	38	37	20	17	2016-17
B.Sc. Industrial Fish and Fisheries	941	38	34	16	18	2017-18
B.Sc. Industrial Fish and Fisheries	1126	38	38	8	31	2018-19
B.Sc. Industrial Fisheries	1009	30	30	10	19	2019-20
M.Sc. Applied Fisheries and Aquaculture	124	24	15	12	3	2017-18
M.Sc. Applied Fisheries and Aquaculture	229	24	25	9	16	2018-19
M.Sc. Applied Fisheries and Aquaculture	275	20	21	8	13	2019-20

**8 STUDENT DIVERSITY**

Year and class	Total strength	No. of students from the same district	No. of students from other states	No. of students from abroad	No of students from other districts
B.Sc. Aquaculture (2016-2019)	30	25	1	0	4
B.Sc. Aquaculture (2017-2020)	29	27	0	0	2
B.Sc. Aquaculture (2018-2021)	28	23	1(Lakshadweep)	0	4
B.Sc. Aquaculture (2019-2022)	26	17	2(Lakshadweep)	0	7
B.Sc. Industrial Fish & Fisheries (2016-2019)	37	25	0	0	12
B.Sc. Industrial Fish & Fisheries (2017-2020)	34	21	1(Lakshadweep)	0	12
B.Sc. Industrial Fish & Fisheries (2018-2021)	39	27	1(Lakshadweep)	0	11
B.Sc. Industrial Fisheries (2018-2022)	30	17	1(Lakshadweep)	1	11
M.Sc. Applied Fisheries & Aquaculture (2017-2019)	15	7	7(Meghalaya)	0	1
M.Sc. Applied Fisheries & Aquaculture (2018-2020)	25	17	6(Meghalaya)	0	2
M.Sc. Applied Fisheries & Aquaculture (2019-2021)	21	12	5(Meghalaya)	0	4



9 STUDENT ACHIEVEMENTS

9.1 FIRST POSITION HOLDERS



JAYALAKSHMI K.H.

M.Sc. APPLIED FISHERIES & AQUACULTURE (2019-20) CGPA – 3.76



JESTIN M.S.

**B.Sc. AQUACULTURE (2017-20)
CGPA – 9.15**



ATHIRA P.S.

**B.Sc. INDUSTRIAL FISH & FISHERIES(2017-20)
CGPA – 9.52**



9.2 ALBERTIAN STAR AWARD 2020 (BEST STUDENT AWARD COMPETITION)

The following students have been judged as the Outstanding Students of the department.



Ms. Namitha Paul B.Sc. Aquaculture 2017-20



Ms. Reshma C.S. M.Sc. Applied Fisheries and Aquaculture 2018-20



AWARD RESULTS

LUMINARY OF THE DEPARTMENT 2020

Albertian Star Award 2020

Sl. No.	Class Number	Name	Department
1	8914	Namitha Paul	B.Sc. Aquaculture
2	4303	Reshma C S	M.Sc. Applied Fisheries & Aquaculture(SF)

GEMS OF THE DEPARTMENT 2020

Albertian Star Award 2020

Sl. No.	Class Number	Name	Department
1	8914	Namitha Paul	B.Sc. Aquaculture
2	8905	Reshma Sebastian	B.Sc. Aquaculture
3	4307	Jayalakshmi K H	M.Sc. Applied Fisheries & Aquaculture(SF)
4	4303	Reshma C S	M.Sc. Applied Fisheries & Aquaculture(SF)



9.3 SPORTS

Ashwin Johny of III Year B.Sc. Industrial Fish and Fisheries secured the Championship Medal in the "Best Physique" Competition 85kg Category of Mahatma Gandhi University held on 30th October 2019.



Ashwin Johny



Ashwin Johny participating and as Winner of the Best Physique Competition

9.4 MODELING

III B.Sc. Industrial Fish and Fisheries student Ms. Pavithra M. made her mark as a Model and was recognized for her aesthetic appearance by one of the most prestigious Women's Magazine in Kerala , "Vanitha" Magazine published by the Malayala Manorama.



Ms. Pavithra M. as a Model in "Vanitha" Magazine



Ms. Pavithra M. (Left Bottom) on the Cover Page of "Vanitha" with Film Actor Tovino Thomas

9.5 CULTURAL

Mahatma Gandhi University Youth Festival - Duff Mutt participants Asaf Ali of 2nd B.Sc. Industrial Fish & Fisheries and Vidhu Krishna V.P. of 3rd B.Sc. Industrial Fish & Fisheries in the team which won 2nd Prize with A Grade in the University Kalolsavam.



DUFF MUTT Team Members

Top Row : Afsal, Godson, **Vidhu Krishnan**, Irfan, Junu & Fahad(L>R)

Bottom Row : **Asaf Ali**, Joel, Arjun & Gladwin (L>R)





DUFF MUTT TEAM IN ACTION AT MG UNIVERSITY KALOLSAVAM

9.6 INTERDEPARTMENTAL COMPETITION WINNERS

a. Inter Departmental Quiz “LOGICISM”

Organized by Research Department of Mathematics on 24/07/2019. Jestin M.S., Namitha Paul and Kavya K.B., all final year B.Sc. Aquaculture 2017-20 students, were adjudged as 2nd Prize Winners.

b. Inter Departmental Essay Writing Competition on “Ozone Concerns and Healing – your Views for a Better Future”

Organized by Research Department of Fisheries and Aquaculture as part of the World Ozone Day Celebrations 2019 on 20/09/2019. Ms.Sandra Thomas M.Sc. Applied Fisheries and Aquaculture 2018-20 - 2nd Prize Winner .

c. Inter Departmental Debate Competition on “Turning Other Planets into Earth or Turn Earth Back to Earth – which is preferable”

Organized by Department of Space Science on 09/10/2019. Ms. Sneha Sajan 2018-21 – 2nd B.Sc. Aquaculture & Silvadasan A.2019-22 – 1st B.Sc. Aquaculture were adjudged as 1st Prize Winners.

d. Onam Celebration Competitions

Team of 6 students Ancy John-III B.Sc. AQUA, Nancy Seline-III B.Sc. AQUA, Sneha Sajan-II B.Sc. AQUA, Aparna Das-II B.Sc. AQUA, Sheba S. Babu-II B.Sc. IF & F & Sruthi Vijay-II B.Sc. IF & F from the department Won the First Prize for the “Onappattu Competition” on 5th September 2019.



Onappattu Competition Winners Ancy John, Nancy Selin, Sneha Sajan & Aparna Das along with HOD Dr. Ajith Thomas John, Dr. Bijoy V.M. and Mercy K.A.


**e. VIP Sa Re Ga Ma Pa Competition Season 1**

Results of VIP SaReGaMaPa Veettil Irunnu Paadaam SaReGaMaPa - Season 1_
Student Category Winner *Miss. Ancy George*




B.Sc. Aquaculture

2019 Batch





Entry No. 27

Likes 1356



Winners

		
1356	569	766
Ancy George	Sheffin Gerorge	Dr. Nisha Thomji
Entry No 27	Entry No 46	Entry No 39
Student Category	Alumni Category	Staff Category

Team VIP Sa Re Ga Ma Pa...

			
Sanders Francis	Vishnu Raj	Prof. Devika V	Prof. Shine Antony
Technical	Technical	Documentation	Coordination

#stayhome #staysafe #vipsaregamapa #albertiansduringlockdown



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www.alberts.edu.in | +91-9895403578 | mail@alberts.edu.in

A.M.D.G



10 STUDENT ENTREPRENEURIAL INITIATIVES

10.1 Althaf E.A. of final year M.Sc. Applied Fisheries and Aquaculture is specializing in the breeding of Angel Fishes.





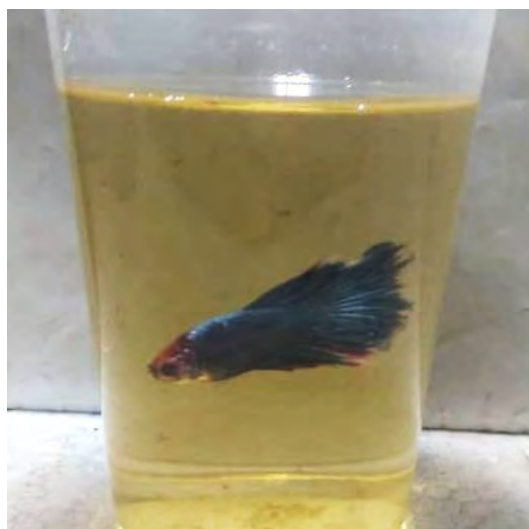
10.2 C.S. Adithya Narayanan II B.Sc. aquaculture is specializing in the breeding of Flower Horns and edible fishes like Mangrove Jack, Seabass, Pearl Spot and Thailand Tilapia.







10.3 Amal Vasu of final year B.Sc. Industrial Fish & Fisheries is specializing in the breeding of Fighter Fishes.





10.4 Joel Roy Paul of II B.Sc. Aquaculture is specializing in the breeding of Crayfishes.



11 INTERNATIONAL ADMISSIONS FOR HIGHER STUDIES

11.1 JOEL THOMAS JACOB B.Sc. Aquaculture 2016-19 secured admission at James Cook University, Townsville, Douglas Campus, Australia for the course

11.2 JEOJITH C. GEORGE B.Sc. Industrial Fisheries 2016-19 secured admission at Nelson Marlborough Institute of Technology, Nelson Campus, New Zealand for the course “Post Graduate Diploma in Sustainable Aquaculture”.

12 GROUP PHOTOS

B.Sc. AQUACULTURE





B.Sc. INDUSTRIAL FISH AND FISHERIES



M.Sc. APPLIED FISHERIES AND AQUACULTURE





13 MEMORANDUM OF UNDERSTANDING

RUNNING MOU'S AS ON 2019-20

1. Central Institute of Fisheries Technology



CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY
(ISO/IEC 17025 NABL Accredited)
INDIAN COUNCIL OF AGRICULTURAL RESEARCH



2. National Institute of Fisheries Post Harvest Technology and Training



Government of India
NIFPHATT

NATIONAL INSTITUTE OF FISHERIES POST HARVEST TECHNOLOGY AND TRAINING
Dept. of Animal Husbandry, Dairying and Fisheries
Ministry of Agriculture & Farmers Welfare





3. Cochin International Airport Limited



MOU'S SIGNED DURING 2019-20**1. MES College, Ponnani****M.E.S Ponnani College**

(Affiliated to the University of Calicut)

Re-accredited by NAAC with A Grade

**Address by Dr. Zubair A.A., Vice Principal, MES College Ponnani****Dr. M.L. Joseph, Principal, St. Albert's College(Autonomous) handing over MOU to Dr. Zubair A.A., Vice Principal, MES College, Ponnani**

2. Food Safety Solutions International, Kochi



Rev. Fr. Antony Arackal, Chairman, St. Albert's College (Autonomous) and Dr. N. Anandavally, Managing Director, FSSI, Signing the MOU



MOU handing over in the presence of L > R Dr. Ajith Thomas John (HOD), Dr. N. Ananthanarayanan, GM of FSSI, Asst. Prof. Shine Antony and Dr. Ginson Joseph

**14 WORLD /NATIONAL DAY CELEBRATION /SEMINARS / WORKSHOPS****14.1 WORLD OZONE DAY CELEBRATION - 20/09/2019**

The Research Department of Fisheries and Aquaculture organized an Inter-Departmental Essay Writing Competition as part of the World Ozone Day Celebration on 20th September 2019 at 01.00pm on the topic "Ozone Concerns & Healing - Your Views for a Better Future" at the department of Fisheries and Aquaculture. Cash Prize and certificates were declared for the Winners. Asst. Prof. Preethi Francis was the Coordinator of the Essay writing Competition. In all 20 students from different departments participated as indicated in the list of participants appended below.

Sl. No.	Name	Department & Course
1	Treesa Taniya P.A	III B.Sc. Physics
2	Sona Felix	II B.Voc. Logistics
3	Sheritta K.R	II B.Com. Taxation
4	Jayalakshmi K.H	II M.Sc. AFA
5	Safida Ps	II B.Voc. Logistics
6	Blesson K Saji	I B.Com. Taxation
7	Merlin Thomas	I B.Sc. Chemistry
8	Sandra Thomas	II M.Sc. AFA
9	Aswathy S	II B.Sc. IF & F
10	Mary Catherine	III B.Com. Taxation
11	Singkhui Chamroy	II M.Sc. AFA
12	Nandana Nelson	II M.Sc. AFA
13	Sreelakshmi B	II B.Sc. IF 7 F
14	Jilu Joseph K.J.	III B.Sc. Aquaculture
15	Aparna Das A M	II B.Sc. Aquaculture
16	Abeeya Ann Sajan	II M.Com
17	Sruthi Vijay	II B.Sc. IF & F
18	Arya Prabhakaran	II B.Com. Taxation
19	Sneha Sajan	II B.Sc. Aquaculture
20	Reshma.T.R	II B.Sc. Industrial Chemistry



The details of the Winners of the Essay Writing Competition is indicated below.

Name	Department	Course	Prize Won
Abeeya Ann Sajan	Commerce	II M.Com	1 st Prize
Sandra Thomas	Fisheries & Aquaculture	II M.Sc. Applied Fisheries and Aquaculture	2 nd Prize
Arya Prabhakaran	Commerce	II B.Com. Taxation	3 rd Prize
Reshma.T.R	Chemistry	II B.Sc. Industrial Chemistry	3 rd Prize



First Prize Winner Abeeya Ann Sajan receiving Certificate and Cash Prize from Dr. Ajith Thomas John, HoD, Department of Fisheries & Aquaculture



Second Prize Winner Sandra Thomas receiving Certificate and Cash Prize from Dr. Ajith Thomas John, HoD, Department of Fisheries & Aquaculture



Third Prize Winner Arya Prabhakaran receiving Certificate and Cash Prize from Dr. Suseela Mathew, Principal Scientist, CIFT



Third Prize Winner Reshma T.R. receiving Certificate and Cash Prize from Dr. Ajith Thomas John, HoD, Department of Fisheries & Aquaculture



Ozone Essay Competition Coordinator Asst. Prof. Preethi Francis after receiving Certificate of Appreciation



14.2 WORLD SCIENCE DAY CELEBRATIONS-2019

"Workshop on Responsible Aquatourism"

Organized By Research Department of Fisheries & Aquaculture

In Association with Department of Travel and Tourism

St. Albert's College (Autonomous), Ernakulam

On 15th November 2019

In connection with "World Science Day Celebrations-2019", Research Department of Fisheries and Aquaculture in association with Department of Travel and Tourism, St. Albert's College (Autonomous), Ernakulam organized the "Workshop on Responsible Aquatourism". This event has conducted at Seminar Hall, St. Albert's College (Autonomous), Ernakulam on 15th November 2019. The programme started with prayer song at 09.00 am followed by the Welcome Speech by Dr. Ajith Thomas John, Head of the Department. Chief Guest, Smt. Nisha P., Farm Manager, MATSYAFED, Government of Kerala inaugurated the WSDPD Celebrations-2019 and delivered Inaugural Address followed by the Presidential Address by Rev. Fr. John Christopher Vadassery, Vice-Principal of St. Albert's, College (Autonomous). Dr. M .L. Joseph, Principal, St. Albert's College (Autonomous) delivered the Principal's Address and also felicitated Dr. Jithu Paul Jacob, Asst. Prof., Research Department of Fisheries and Aquaculture for securing Doctor of Philosophy from CUSAT, Cochin. The Inaugural Session concluded with the Vote of Thanks by Dr. Ginson Joseph, Convener and Organizing Secretary, WSDPD-2019.

Technical Session commenced at 10.00am with the talk by the Chief Guest Smt. Nisha P., on the topic "Scientific Guidelines for Responsible Aqua Tourism" followed by intercollegiate "PowerPoint Presentation Competition" on the topic "Responsible Aqua-Tourism". Dr. Ajai G. Kamath, Asst. Prof., Department of Hindi, Asst. Prof. Neenu Jose, HOD, Dept. of Logistics, Dr. Bijoy V. M. Asst. Prof., Research Department of Fisheries and Aquaculture and Jose Emmanuel, Asst. Prof., Research Department of Fisheries and Aquaculture were the judges of the Competition. Eleven candidates participated in the

Power Point Competition and Aparana Das (II Year B.Sc. Aquaculture) bagged the First Prize, Sneha Sajan (II Year B.Sc. Aquaculture) and Sona Rose Shaji (III Year B.Sc. Aquaculture) shared Second prize and Namitha Paul (III Year B.Sc. Aquaculture) got Third Prize. The Valedictory function was hosted by Nikitha Shaji Thomas, Asst. Prof., Dept. of Travel and Tourism, St. Albert's College and the cash prizes (*ie.*, First Prize Rs., 1000, Second Prize Rs. 750 and Third Prize Rs. 500) along with Certificates for the winners were distributed by Prof. Arya M.S, Prof. Jose Emmanuel and Prof. Neenu Jose. A total of 82 participants registered for WSDPD-19. The programme concluded with the National Anthem at 1.00 pm.



Dr. Ajith Thomas John HoD Welcoming the guests. Left to Right : Dr. Ginson Joseph Convenor, Mr.Manu C. Mathew, President, St.Albert's Alumni Association, Dr. M.L. Joseph, Principal, Rev. Fr. John Christopher, Vice Principal, Chief Guest Nisha P., Farm Manager, MATSYAFED, Rosalind Gonzaga, Vice Principal, Zubair A.A., Vice Principal, MES College Ponnani.



Chief Guest Smt. Nisha P., Farm Manager MATSYAFED delivering the Inaugural Address



Rev. Fr. John Christopher presenting memento to Chief Guest Sm. Nisha P.



WSDPD 2019 Convenor Dr. Ginson Joseph proposing the Vote of Thanks

STUDENT POWERPOINT PRESENTATIONS





VALEDICTORY FUNCTION



Asst. Prof. Nikitha Shaji Thomas hosting the Valedictory Function Left to Right Prof. Jose Emmanuel, Dr. Bijoy V.M., Dr. Ajai G. Kamath, Dr. Ajith Thomas John HoD Fisheries and Aquaculture, Prof. Arya M.S. HoD Travel & Tourism, Prof. Neenu Jose HoD Logistics Management, Dr. Ginson Joseph Convenor



14.3 THREE DAY INTERNATIONAL WORKSHOP CUM TRAINING ON "BASIC HYGIENE AND APPLICATION OF HACCP BASED FOOD SAFETY MANAGEMENT SYSTEM (LEVEL-3)" 19TH – 21ST NOVEMBER 2019

International Workshop cum Training on "*Basic Hygiene and Application of HACCP based food safety Management system (Level-3)*" has been organized by Albertian Centre for Human Resource Development and Research in association with Research Department of Fisheries & Aquaculture, St. Albert's College (Autonomous), Ernakulam and Food Safety Solutions International on 19th – 21st November, 2019. This event has conducted at Emmanuel Hall, St. Albert's College (Autonomous), Ernakulam. The training programme started with prayer song at 09.00 am followed by the welcome speech by Prof. Shine Antony, Co-ordinator, HRDR, St. Albert's College, Ernakulam. Chief Guest, Dr. Moe Theingi Hlaing, Lecturer, East Yagon University, Myanmar inaugurated the programme and delivered Inaugural Address. Dr. Anadavally, Managing Director, Food Safety Solutions International addressed the gathering followed by the Presidential Address by Rev. Fr. John Christopher Vadassery, Vice-Principal of St. Albert's, College (Autonomous). Dr. Rosalind Gonzaga (Vice principal) and Dr. Ajith Thomas John, HOD, Research Dept. of Fisheries and Aquaculture addressed the gathering. Dr. Ananthanarayanan, General Manager, Food Safety Solution International was present in the programme. The Inaugural Session concluded with the Vote of Thanks proposed by Dr. Ginson Joseph, Convener and Organizing Secretary of the programme.

Chief Guest, Dr. Moe Theingi Hlaing, Lecturer, East Yagon University, Myanmar delivered a talk on the topic of "Challenges in my Ph.D. Study". St. Albert's College (Autonomous) has signed MoU with the Food Safety Solutions International on 21st November, 2019. Three days training programme covered various aspects of food safety measures. Dr. Ginson Joseph, Convener and Organizing Secretary of the programme delivered a lecture on the topic of "HACCP for Seafood safety" on 21st November, 2019. Rev. Fr. Jolly John

Odathackal, Vice Chairman and Asst. Manager, St. Albert's College, Dr. Ajith Thomas John, HOD, Research Dept. of Fisheries and Aquaculture, Dr. Anadavally, Managing Director, Food Safety Solutions International, Dr. Anathanarayanan, General Manager, Food Safety Solution International, Dr. Ginson Joseph, Convener and Organizing Secretary of the programme and Prof. Shine Antony, Co-ordinator, HRDR, St. Albert's College, Ernakulam were present in the Valedictory Function. Rev. Fr. Jolly John Odathackal, Vice Chairman and Asst. Manager, St. Albert's College distributed the certificates to the participants. Total 33 students participated of which two were from B. Voc Food Processing Technology, St. Teresa's College (Autonomous), Ernakulam. The programme concluded with the National Anthem.



Chief Guest, Dr. Moe Theimngi Hlaing, Lecturer, East Yagon University, Myanmar Inaugurating the HACCP Training Sitting from L-R Asst. Prof. Shine Antony, Coordinator, HRDR, Dr. Ginson Joseph, Convener and Organizing Secretary, Dr. Rosalind Gonzaga (Vice principal), Rev. Fr. John Christopher Vadassery, Vice-Principal, Dr. Anadavally, Managing Director, FSSI, Dr. Ajith Thomas John, HOD and Dr. Anathanarayanan, General Manager, FSSI



Participants along with the Chief Guest, Trainers and the Organizing Committee



14.4 ALBERTIAN KNOWLEDGE SUMMIT

The Research Department of Fisheries & Aquaculture in connection with Albertian Knowledge Summit (AKS 2020) – An International Conference on Multidisciplinary Research organized a two National Seminars on the focal themes “Advances in Molecular Technology for Enhancing Fish Production” and “Relevance of Fish Nutrients in Sportsmen Nourishment” on 20th and 21st of January 2020 respectively.

On 20th Jan 2020, the National Seminar on the focal theme “Advances in Molecular Technology for Enhancing Fish Production” was inaugurated by **Dr. I.S. Bright Singh**. He is the Emeritus Professor, National Centre for Aquatic Animal Health, CUSAT. An outstanding Marine Biologist of India. Sir has held several high positions throughout his career; to mention a few:-

- Member, Committee on Management and control of aquatic animal diseases - Ministry of Agriculture, Govt. of India
- Dean, Faculty of Environmental Studies, CUSAT,
- Director, School of Environmental Studies, CUSAT
- Visiting Professor, University of Northumbria, UK
- UGC-BSR Faculty, National Centre for Aquatic Animal Health, CUSAT and so forth.

His Research Areas include Marine/Environmental Biotechnology, Aquatic Animal Health, Recirculating Aquaculture Systems (RAS). He has completed numerous single institutional and multi institutional research projects and has several international research collaborations. With over 130 publications and holds around 7 patents, Dr. Singh has received a lot of awards and honours including **Eminent Zoologist Gold Medal in 2008** and **Fellow, National Academy of Agricultural Sciences (NAAS) ICAR 2014**.



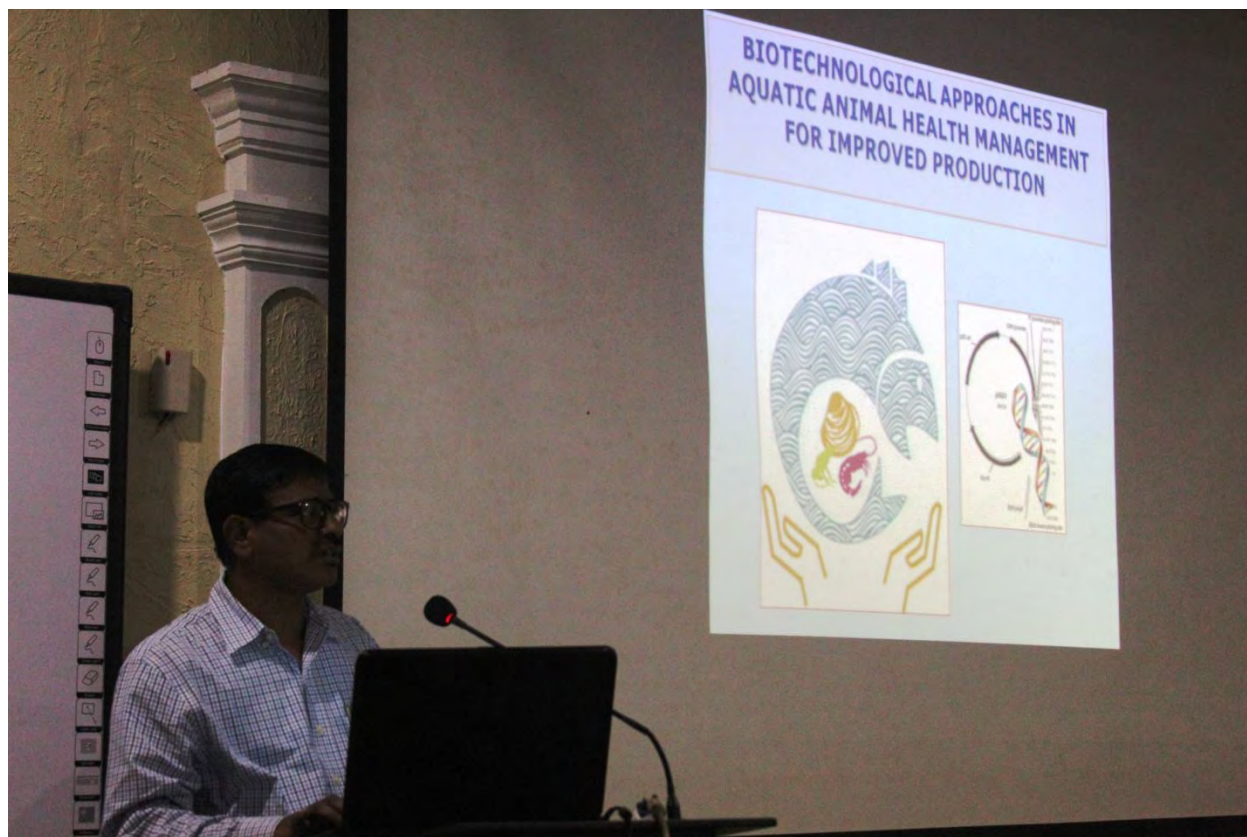
Inauguration & Key Note address Dr. I.S. Bright Singh

Dr. Ajith Thomas John, the Head of the Department of Fisheries & Aquaculture welcomed the gathering. Principal of the college, Dr. M L Joseph gave the Principal's Address. Rev. Fr. John Christopher Vadassery, Vice Principal graced the occasion with words of felicitation. Dr. Jithu Paul Jacob, Assistant Professor, Department of Fisheries & Aquaculture, Convenor of the Seminar, proposed the Vote of Thanks at the end of the inaugural session.

Dr. I.S. Bright Singh then delivered the Keynote Address on the topic **"Molecular tools and devices for sustained fish production"**. The conventional methods of PCR method as disease diagnostic tools invented by Gary Mullis was mentioned in his key note address and the sequence analysis of amplicons by Sanger sequencing was also incorporated in his presentation.



The Technical Session began with the first session by **Dr. T. Citarasu**, on the topic **“Biotechnological approaches in aquatic animal health management for improved aquaculture production”**. He mentioned about different diagnostic methods and tools for managing in his presentation.





Dr. T. Citarasu, Assistant Professor, Centre for Marine Science and Technology, Manonmaniam Sundaranar University, Kanyakumari. Dr.Citarasu has numerous national and international publications. Sir has held several academic positions and has been in the professional bodies of various associations. Also received a number of awards including Postdoctoral Fellow at Institute for Hydrobiology, Chinese Academy of Sciences, Young Scientist at Centre for Marine Science and Technology, Manonmaniam Sundaranar University and Visiting Assistant Professor at Institute of Marine and Environmental Technology (IMET), University of Maryland Baltimore County (UMBC), USA. He is engaged in providing consultancy services to shrimp culture farmers in Tamil Nadu and Andhra Pradesh. He is acting as an editorial board member and reviewer of various high impact factor journals.

“Application of genetics in fish breeding and fisheries management” was the topic of second technical session covered by **Dr.Jeena. N.S.** She mentioned about the genetic in fish breeding and methods of management in her presentation.



Dr.Jeena. N. S., Scientist, Fish Genetics and Breeding, Marine Biotechnology Division, Central Marine Fisheries Research Institute, Cochin. She completed her Post Graduation in Fish Genetics & Biotechnology from Central Institute of Fisheries Education (CIFE), Mumbai and did her Ph. D in Marine Science from Cochin University of Science & Technology. Dr.Jeena’s area of research includes Genetic characterization, Evolutionary genetics, Population Genetics and so forth. Fifty Seven students participated on Day one.





On 21st Jan 2020, a National Seminar on the focal theme “Relevance of Fish Nutrients in Sportsmen Nourishment” was inaugurated by **Dr. Suseela Mathew**, Head of Division of Biochemistry & Nutrition, Central Institute of Fisheries Technology, Kochi. She completed her Masters in Industrial Fishery Technology and Ph.D. in Post-Harvest Technology. She had received several awards and recognition in the fields of Biochemistry and Nutrition related to Fish & Fishery Products. She has authored several publications in high impact factor journals. She distributed the prizes to the winners of the Essay completion held in our department at the Ozone day celebration. Dr. Ajith Thomas John, the Head of the Department of Fisheries & Aquaculture welcomed the gathering. Principal, Dr. M L Joseph gave the Principal’s Address. Rev. Fr. John Christopher Vadassery, Vice Principal of the college graced the occasion with words of felicitation. Dr. Jithu Paul Jacob, Assistant Professor, Department of Fisheries & Aquaculture and convenor of the seminar, proposed the vote of thanks at the end of the inaugural session.

In her key note address **Dr. Suseela Mathew** covered the topic on “**Marine Nutraceutical Development in India - A way forward**”. She mentioned about nutraceuticals, classification and some of the important fish nutraceuticals was also covered in her topic. She also gave a brief idea about development of nutraceuticals in her presentation.



Inaugural Address and Key Note Address by Dr. Suseela Mathew

The technical session was handled by **Dr. Anandan R.** on “**Nutritional, Pharmacological and Biomedical Applications of Marine Biomolecules**”. He talked about different products initiated by CIFT in his presentation. He is working as Principal Scientist, Biochemistry & Nutrition Division, Central Institute of Fisheries Technology, Cochin. Sir holds numerous awards and recognitions, like ICAR National Fellowship by ICAR Editor of various prestigious journals like Current Research Journal of Biological Sciences, International Journal of Pharmaceutical and Chemical Sciences (IJPCS), Comprehensive Journal of Agricultural and Biological Science, International Journal of Research in Pharmaceutical and Biomedical Sciences (IJRPBS) etc. He is a Member of Board of Studies (Biochemistry)- PSG College of Arts & Science, Coimbatore. His areas of research are Nutritional Biochemistry and Toxicology. Fifty Four students participated on day two. The programme ended after this technical session. Certificates were provided for the participants.



Scientific Lecture Dr. Anandan R., CIFT



Audience at the National Seminar



Team Aquaculture at the Venue of AKS 2020



14.5 NATIONAL SEMINAR ON ‘RECENT TRENDS IN BIOMEDICAL TECHNOLOGY’ AND ESSAY WRITING COMPETITION - 25TH & 28TH FEBRUARY, 2020

National Science Day is celebrated in India on February 28 each year to mark the discovery of the “Raman Effect” by Indian Physicist Sir Chandrasekhara Venkata Raman on February 28, 1928. Research Department of Fisheries & Aquaculture, St. Albert’s College (Autonomous), Ernakulam organized a National Seminar and Essay Writing Competition to become a part of remembering this great achievement in the history of Indian science. The focal theme of the program was **‘Women in Science’**. The event was sponsored by KERALA STATE COUNCIL FOR SCIENCE, TECHNOLOGY AND ENVIRONMENT (KSCSTE), Govt. of Kerala and was supported by Department of Science and Technology (DST), Govt. of India. The programme comprised of 1) National Seminar on “Recent Trends in Biomedical Technology” held on 25th Feb, 2020; 2) Essay writing competition on the focal theme ‘Women in Science’ was held on 28th Feb, 2020.

DAY 1- FEBRUARY 25, 2020

NATIONAL SEMINAR

The inaugural session commenced with the Prayer Song, sung by Ms. Anjala & Ms. Ancy George, Students, I B.Sc. Aquaculture. Welcome speech was delivered by Dr. Ajith Thomas John (HOD, Dept. of Fisheries & Aquaculture), and the function was presided by Dr. M.L. Joseph, Principal, St. Albert’s College. Dr. Annie Abraham, Director of Research, University of Kerala, Thiruvananthapuram, Kerala formally inaugurated the programme by lighting the lamp and delivered the Inaugural Address. Dr. Rosalind Gonzaga, Vice Principal, felicitated on the occasion. Inaugural Session concluded with the Vote of Thanks delivered by the Convenor, Dr. Vibin M., Asst. Professor of Biochemistry, St. Albert’s College (Autonomous).



The Keynote Address was delivered by the Chief Guest- Dr. Annie Abraham, Director of Research, University of Kerala, Thiruvananthapuram, Kerala on the topic “Recent Developments in Tissue Engineering Research”. The students as well as faculty from all departments participated in this session. Dr. Annie Abraham, being a hardcore biochemist also spoke on the overview of the focal theme and made clear the topic and objective of the seminar. Further, her encouraging speech paved way for evoking the students to take up research and most importantly to develop self employment and entrepreneurship. She further emphasised to carry out research with aim for the Nobel Prize. The talk was most informative which enlightened the students and students.

The second SCIENCE LECTURE was presented on a very relevant topic ‘Nanomedicine: Potential and Limitations’ by Dr. Anusha Ashokan (DST Inspire Faculty, CUSAT). She depicted the wonderful usage of Nanomedicine in recent research, highlights its potential medicinal application. Her talk extended to nanotoxicology and nano food systems and ignited the spark among the young emerging researchers.

The third SCIENCE LECTURE was presented on a very significant topic “Women's role in science in India” by Prof. J. Beny, Assistant professor, Department of Mathematics, Holy Cross College (Autonomous), Trichy -02, Tamil Nadu. She had put a spotlight on popular women in science & technology especially the contributions of E K Janaki Ammal (1897-1984), B Vijayalakshmi (1952-1985): Asima Chatterjee (1917-2006): Anna Mani (1918-2001): Kamal Ranadive (1917-2001): Darshan Ranganathan (1941-2001): Kamala Sohonie (1911-1996): Dr. Tessy Thomas : Marie Curie (1867-1934): Rosalind Franklin (1920-1958): Barbara McClintock (1902-1992): Rachel Louise Carson (1907-1964): Maria Goeppert-Mayer (1906-1972): Irène Joliot-Curie (1897-1956).

Students, Teachers and researchers from various colleges and neighboring institutions participated in the research paper presentation. Selected research



papers from various colleges have been presented in the Research paper presentation session. Dr. Simi Kutty, St. Joseph's College, Trichy, presented a paper on 'Surface functionlized quantum dots for biomedical application'. Ms. Maya Mathew, Research Scholar, St. Xavier's College, Aluva, presented a paper entitled 'Antimicrobial Resistance in Aquatic Ecosystem:Prevalence & Cosequences'. Mr. Jestin M.S., B.Sc. Aquaculture, St. Albert's College (Autonomus), presented a paper entitled 'A comparative analysis on antibacterial effect of 0.8% Chitosan over 1% Acetic acid on short term refrigerated storage of whole threadfin bream (*Nemipterus japonicus*).

DAY 2- FEBRUARY 28, 2020

ESSAY WRITING COMPETITION ON 'WOMEN IN SCIENCE'

The essay writing competition on the focal theme was conducted on February 28th, 2020. Students actively participated in the ESSAY WRITING COMPETITION on the focal theme "Women in Science".

CONCLUDING SESSION

In the concluding session of NSD 2020, Dr, Vibin M (Coordinator NSD 2020), appreciated the organizing team and student volunteers of NSD celebrations 2020. More than 150 students and public participated in this event and made it a great success.

Feedback from students, teachers as well as from resource persons made it clear that the programme was successful and beneficial especially for science students. The science lectures presented on focal theme 'Women in Science' during seminar were very interesting. Cooperation from teaching and non-teaching staff helped to run the program successfully with least demerits.



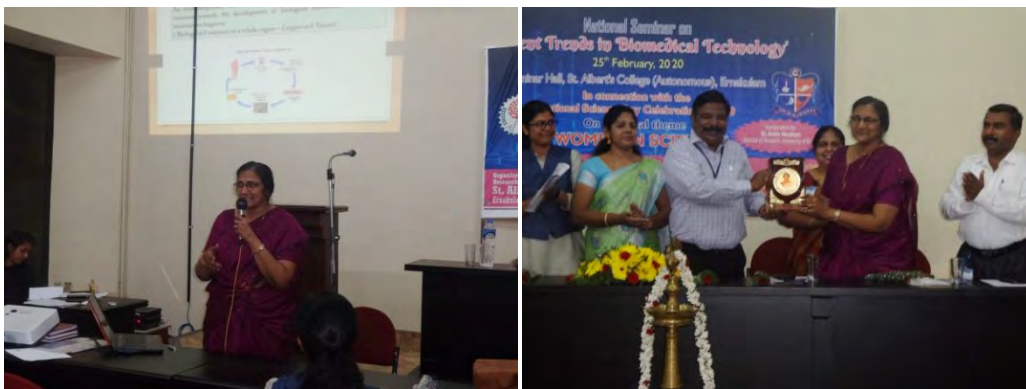
The inaugural session commenced with prayer, sung by Anjila & Ancy George, Students, I B.Sc. Aquaculture.



(Left) Welcome speech was delivered by Dr. Ajith Thomas John(HOD); (Right) Chief Guest- Dr. Annie Abraham, Director of Research, University of Kerala, Thiruvananthapuram, Kerala formally inaugurated the programme by lighting the lamp and delivered an inaugural address.



(Left) Prof. J. Beny, Assistant professor, Department of Mathematics, Holy cross College (Autonomous), Trichy, Tamil Nadu is associating the inaugural ceremony; (Right) Dr. M. Vbin, Asst. professor of Biochemistry, St. Albert's College and convener of the program delivering the vote of thanks.



(Left) Keynote address delivered by Chief Guest- Dr. Annie Abraham, Director of Research, University of Kerala, Thiruvananthapuram, Kerala; (Right) Receiving a memento from the Principal, St. Albert's College.



(Left) Science Lecture delivered by Dr. Anusha Ashokan (DST Inspire Faculty, CUSAT); (Right) Receiving a memento from Prof. Jose Emmanuel., Dept. of Fisheries & Aquaculture, St. Albert's College.



(Left) Science Lecture delivered by J. Beny, Assistant professor, Department of Mathematics, Holy cross College (Autonomous), Trichy -02, Tamil Nadu; (Right) Receiving a memento from Dr.Bijoy V.M., Dept. of Fisheries & Aquaculture, St. Albert's College.



Glimpses from Essay writing competition and Research paper presentation on the focal theme.

LIST OF STUDENTS PARTICIPATED IN ESSAY WRITING COMPETITION AND WINNERS

Sl. No.	Student Name	Program	College
1	Joel Roy Paul(3 rd Prize)	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
2	Meera V T	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
3	Emily Xavier	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
4	Divya M V	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
5	Maria Geethu (1 st Prize)	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
6	Sneha Sajan	B.Sc. II year Aquaculture	St. Albert's College(Autonomous)
7	Nina Mariya	B.Sc. I year Aquaculture	St. Albert's College(Autonomous)
8	Aashna Joseph	B.Sc. I year Aquaculture	St. Albert's College(Autonomous)
9	Aleena Benny(2 nd Prize)	B.Sc. I year Aquaculture	St. Albert's College(Autonomous)
10	Renjini E S	B.Sc. I year Aquaculture	St. Albert's College(Autonomous)



15 SOCIAL OUTREACH ACTIVITIES

15.1 SEMBANAD FISH COUNT 29-30TH MAY, 2019

The Sembanad Fish Count Survey makes an attempt to quantify fish diversity in central Kerala's Sembanad Lake every year. Volunteers and scientists counted as many as 117 fish species in this year as reported. Coordinators of the fish count, including the Ashoka Trust for Research in Ecology and Environment (ATREE) and the **Kerala** University of Fisheries and Ocean Studies (KUFOS) jointly organized this year survey. A team of 13 students along with one faculty from our institution participated in the event.

The date permitted for the Albert's College was on 29 and 30th of May 2019. Students reached on 29/05/2019 evening and attended the Seminar Session which gave brief description of the area and importance of the survey. Mr.Jojo, Director, ATREE, divided the group and selected a captain and vice-captain for each team. Our students were distributed in the three groups for the cruise Southern, Northern and Central Zone, respectively for the Sembanad Fish Count Survey.

On the morning of 30/05/2019 at 05.00am the team joined the cruise into the Sembanad Lake. Students learned the taxonomy of diverse species and analyzed water quality parameters along with survey on the herbs and mangroves distributed along the Lake. Teams observed such a high number of fish species during the survey with areas north of the Thanneermukkam Bundh, including Arookutty, High Court, Poothotta, Murinjapuzha, and Kanakkankadavu being included. Each year only the southern expanse, from Punnamada to the Thanneermukkam Bundh, had been included in the survey.

The survey earned a thorough knowledge about the species diversity, taxonomy, and collection and preservation methods of fish samples including water



samples. “As far as the teaching methods concerned the participation of such kind of field activities improve the basic knowledge and innovative thoughts of students” said Namitha Paul of B.Sc.Aquaculture, Final Year student.

LIST OF STUDENTS-SEMBANAD FISH COUNT 2019

3rd Year B.Sc. Aquaculture

Sl. No.	Name of Student	Gender	Contact Number	Email ID
1	Yadu Krishnan	Male	9567144935	yadukrishban@gmail.com
2	Namitha paul	Female	9947480189	naminavya@gmail.com
3	Shiya Biju	Female	8606800423	shiyabiju3120@gmail.com
4	June Mary josy	Female	6282428967	junem8708@gmail.com

3rd Year B.Sc. Industrial Fish & Fisheries

Sl. No.	Name of Student	Gender	Contact Number	Email ID
1	Vishal Vasavan	Male	8848685151	vishalvasavan7930@gmail.com
2	Anakha Babu	Female	7902311851	babusindhus@gmail.com
3	Athira P S	Female	7994561116	aathuathira000@gmail.com
4	Devika P S	Female	9895186380	minnudevika1999@gmail.com
5	Sreelakshmi K R	Female	9020693920	krsreelakshmi20@gmail.com

2nd Year B.Sc. Industrial Fish & Fisheries

Sl. No.	Name of Student	Gender	Contact Number	Email ID
1	Sruthi Vijay	Female	8156868348	sruthivijay2109@gmail.com
2	Midhu Silvester	Female	9746569277	midhumegha16@gmail.com
3	Megha Silvester	Female	9746569277	meghasilvester18@gmail.com
4	Jeseentha Joel C.T	Female	8089362709	jaseentha Joel271@gmail.com

Name of accompanying faculty : Dr. Jithu Paul Jacob, Assistant Professor



Student Participants



Stolephorus indicus



Species for counting



Water Quality Analysis



Enumeration of indigenous species after collection



15.2 SOCIAL OUTREACH HANDS-ON TRAINING ON HYGIENIC FISH HANDLING AND FISHERY PRODUCTS DEVELOPMENT FOR FISHERWOMEN JULY 24th 2019

On July 24th a one day training programme was conducted in St Albert's College(Autonomous), for women working in the field of fisheries on the topic "Hygienic Fish handling and Value Added Fishery Products Development". This was a social outreach awareness programme organized by the Research Department of Fisheries and Aquaculture St Albert's College (Autonomous) in association with NIFPHATT (National Institute of Fisheries Post Harvest Technology and Training) a Central Government Organization and SAF (Society for Assistance for Fisherwoman) which is under the state government.

The venue for the inauguration of the training was the Emmanuel Hall of St Albert's College(Autonomous). The inaugural function took place on 24th July at 9.30AM. Head of the Department Dr.Ajith Thomas John welcomed the gathering and Chief Guest of the day Mrs.Gracy Joseph, Committee Chairperson of Cochin Corporation Planning & Development, inaugurated the function. In her inaugural address pointed the importance of women in the field of fisheries. Assistant Manager and Vice Chairman, Rev. Fr. Jolly John Odathakal, in his Presidential Address stated the rising issue of chemical pollution which is a threat to fisheries related activities. College Principal Dr. M L Joseph, SAAF Nodal Officer Smt.P K Usha, 67 Division Councilor of Kochi Corporation Smt. Gracy Babu Jacob along with Mr. C. Sreekumar, Processing Technologist, NIFPHATT, delivered the felicitations. Programme Convenor, Asst. Prof. Preethi Francis proposed the Vote of Thanks.



Presidential Address by Rev. Fr. Jolly John Odathakkal, Vice Chairman and Asst. Manager, St. Albert's College(Autonomous)



Inauguration of the training by Mrs.Gracy Joseph, Committee Chairperson of Cochin Corporation Planning & Development



Felicitation by Mr. C. Sreekumar(Chief Trainer), Processing Technologist, NIFPHATT

At the beginning of the Training Session Asst. Prof. Sameera Shamsuddeen introduced 33 women about the training programme as well as the Trainer Mr.C. Sreekumar, Processing Technologist, NIFPHATT. The training programme was started sharp at 10:30 in the Fisheries and Aquaculture Department. The training was given to the participating trainees and faculty in making fishery products such as fish cutlet, fish balls, fish wafers and fish fingers.

Fisherwomen working under Society for Assistance to Fisherwomen(SAF) were selected for the training programme. 15 fisherwomen from kudumbasree activity groups like Ammos, Apple, Heaven, Matsyagandha , Rose, Jyotis coming under Kochi cooperation. 11 fisherwomen from Souhridha-B, sealand, jyothi, Aiswarya under Elamkumapuzha Panchayat, followed by 5 fisherwomen from 3-star, Kalyanie Jasmine Unit under Njarakkal Panchayat, actively participated in the programme. The training session was handled by Processing Technologist Mr.C. Sreekumar along with 3 assistants from NIFPHATT and the session comprised of preparation of products like fish cutlet, fish pickle, fish wafer and fish finger etc.



The programme concluded at 3.00PM in the afternoon with the Vote of Thanks by Head of the Department.

Convenors : Asst. Prof. Preethi Francis & Asst. Prof. Sameera Shamsudheen







Fish Cutlets ready for frying



15.3 SOCIAL OUTREACH BEACH CLEANING PROGRAMME

PARTICIPATION IN CLEAN SEAS CAMPAIGN

Organized by

Department of Marine Biology, Microbiology and Biochemistry, CUSAT and National Center for Coastal Research (NCCR) and MoES Government of India on 21/09/2019

In connection with the International Coastal Cleanup Day

The School of Marine Sciences of Cochin University of Science and Technology, Kochi has conducted ‘Clean Seas Campaign’ at Fortkochi Beach on 21st September 2019, as a part of the ‘International Coastal Cleanup Day – 2019’. The programme was held in association with different Institutions and organizations including St. Albert’s College (Autonomous), Ernakulam; Marine Products Export Development Authority (MPEDA), Kochi; South Asia Co-operative Environment Programme (SACEP); National Centre for Coastal Research (NCCR) and United Nations Environment Programme (UNEP). The campaign started at 8 AM in the morning with an inaugural address of Dr. K.N. Madhusoodanan (Vice Chancellor, CUSAT).

Prof. Dr. S. Bijoy Nandan (Coordinator and Head, Department of Marine Biology, Microbiology and Biochemistry, CUSAT), Dr. V.M. Bijoy (Asst. Professor and Senior Faculty Member, Research Dept. of Fisheries and Aquaculture, St. Albert’s College, Ernakulam), Smt. Shiny Mathew (Standing Committee Chairperson, Corporation Office, Fortkochi) Shri. Antony Francis (Councillor, Fortkochi) spoke on the occasion. 22 students and 2 faculty members from the Research Department of Fisheries & Aquaculture, St. Albert’s College (Autonomous), Ernakulam, Staff and students of Bharat Mata College, Thrikkakara and Scientists from CIFT, Kochi were the participants along with the staff and students of the host Institution, School of Marine Sciences, CUSAT. The waste materials collected from the beaches were gathered in plastic bags and were handed over to the Corporation authorities with proper documentation. The campaign came to an end at around 11.30 AM with a rally of the students and staff members.

Participating Faculty : Dr. Bijoy V.M. and Asst. Prof. Sivakumar G.





**List of Students Participants
1st B.Sc. Aquaculture**

Sl. No.	NAME OF THE STUDENT	STUDENT PHONE NUMBER
1	Aparna Haridas	9946114007
2	Anjala Anju	7902908284
3	Nihala Fathima Rasheed	7025342137
4	Aleena Benny	7594940444
5	Ann Varna K. X.	-
6	Aneesa A. S.	9895369140
7	Shibla M. M.	9037315913
8	Anjana Roy	9567893568
9	Santa Maria	9497538348
10	Nina Mariya	-
11	Ancy George	9188896920
12	Mary Amritha Laiju	8089558082

1st B.Sc. Industrial Fish & Fisheries

Sl. No.	Name of Student	Parent/Student (Phone number)
1	T V Ajumal	9207211271
2	Shiljin Babu	9747608867
3	Arjun Chandran	9074989214
4	Karthika P P	9447578447
5	Agna Mary	9633699287
6	Sandra Ajayan	9946941933
7	Mareena Joseph	9074399581
8	Athul Sebastian	9633971389
9	Talin Benny	9400731863
10	Reshma Mariam Kurien	7025855298/9605169962

15.4 SOCIAL OUTREACH FLOOD RELIEF

St. Albert's College (Autonomous) made a generous gesture to provide most needed food materials to the flood affected victims of Eloor. One hundred and fifty families were provided with relief material. Dr. Ajith Thomas John and Dr. Bijoy V.M. and five students from the department along with a team of faculty and students from the college actively participated in the initiative through the stages of packing, transportation and delivery.





**15.5 SOCIAL OUTREACH ALBERTIAN SWACHATHA MISSION**

(Platinum Jubilee Celebrations 2016-21)

As a part of Gandhi Jayanthi celebrations 2019 at St. Albert's College, Autonomous, an Albertian Swachatha Mission was conducted. It was a 5 day program, starting from 28th of September to 2nd October. Each day a different program was initiated, as following:

27th September – Seminar by students.

28th September – Swachatha Kudumbam – #MyCleanHomeChallenge (Before & After).

29th September – Changathikootam – a cleaning drive.

30th September – Swachatha Classroom – Class cleaning, monthly cleaning time table, department lab, verandah cleaning, awareness programme.

1st October – Swachatha Kalalayam – Cleaning of college and premises.

2nd October – Swachatha Naad – Cleaning of Banerji Road.

The Research Department of Fisheries & Aquaculture took an actively participated in the activities. The Swachatha Mission flagged off with seminars on pre-determined topics by 4 students from each class. The students of each class then shared the before & after pictures in the #My Clean Home Challenge Campaign and # Changathikootam a cleaning drive. On the 3rd day of the mission class cleaning was undertaken. All the classrooms, lab facilities including the museum were cleaned and arranged by the students of respective classes.

DUTIES ASSIGNED TO CLASSES FOR SWACHATHA NAAD

Sl. No.	CLASS	AREA	TEACHER IN-CHARGE
1	I IF&F	INFRONT OF ENT CLINIC	Dr.Jithu Paul Jacob
2	I AQ	INFRONT OF SOUND SYSTEM -PARIS	Prof.Freeda Rebaca
3	II AFA	SANJOE FRONT AREA	Prof.Jose Emmanuel
4	I AFA	CHURCH FRONT	Prof. Sameera Shamsudheen
5	II IF	AMULYA -PUNJABI DHABA	Prof.Sislave K.S.
6	II AQ	INFRONT OF PUNJABI DHABA	Dr. Ginson Joseph
7	III IF	CHIANG TO JUNCTION	Prof.BisiK. Paul
8	III AQ	FRONT OF MADHAVA PHARMACY	Dr. Vibin M.

On the final day- 2nd of October cleaning of Banerjee road up to North Over Bridge was the proposed plan and the area allotted for the department was from IS Press Road to Madhava Pharmacy Junction. The allotted area were again fine divided into different sections and each class was given a particular



section. Mr. Saju Philip, Ex- Naval Officer was the Chief Guest of the Department who inaugurated the cleaning drive at the starting point – Dr. D’Souza’s House. The cleaning drive began with a prayer and followed by a welcome address by the Head of the Department. The programme was inaugurated with an inaugural address and a cleaning activity by the chief guest. All the students took active part in the cleaning mission. Proper gears and equipments were provided by the college required for the cleaning activities.

Seminar by the Students:





Swachatha Kudumbam and Swachatha Classroom : Home and Department Cleaning

2

BEFORE



AFTER



BEFORE



AFTER



Students engaged in Cleaning Aquaculture Lab





October 2nd Swachatha Nadu : Cleaning Banerji Road from IS Press Road to Madhava Pharmacy Jn.



16 ALBERTIAN EDUCATION EXPO 2020

16.1 AQUASHOW 2020

Research department of Fisheries and aquaculture organized an aquashow as part of Albertian Educational Expo from 9/01/2020 to 11/01/2020 inside the college campus.

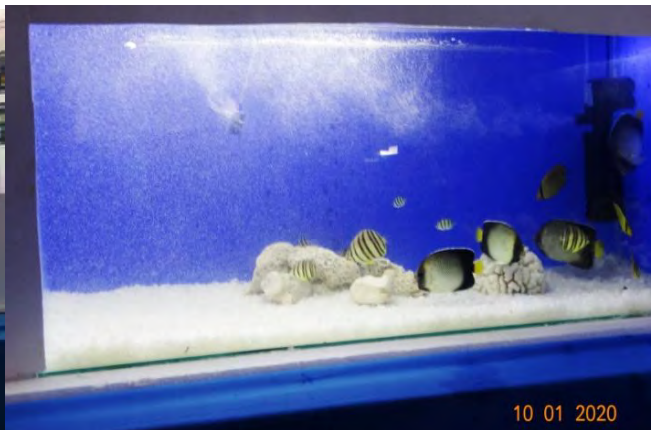


The expo aimed to bring awareness among the students and public about the recent developments in the field of ornamental fisheries and aquaculture. There were about ten stalls and about forty exhibits. The stalls were planned in such a way that it started with the indigenous ornamental fishes of Kerala and ended with career opportunities and higher study options in the field of aquaculture and fisheries.

There were two stalls exclusively for the indigenous fishes and major Fishes exhibited included world famous Miss Kerala, Melon barb, Rosy barb, Hill trouts, *Channa diplograma* (Malabar snake head) etc. The planted aquariums were used to exhibit these wonderful fishes. The plants included Vallisneria, Cabomba, Amazon sword, Myriophyllum, Ludwigia, Hydrilla etc.



Third stall was entirely for the marine varieties. Marine condition was created by dissolving sea salt. There were beautiful collection of marine ornamental fishes which included Bubble tip sea anemone, starfishes, clown fishes, green carpet, smoke angel, Pakistani butterfly, eight banded butterfly, emperor fish, lion fish, Moorish idol, moon wrasse, doctor wrasse, sergeant major and spotted damsel.



Fourth stall was used to exhibit the beautiful guppies. Guppies of different varieties were exhibited with the male and female exhibited separately.

Fifth stall was stocked with brackish water fishes common in Cochin back waters. We exhibited *Scatophagus* sp, Snapper and Trevally fish.

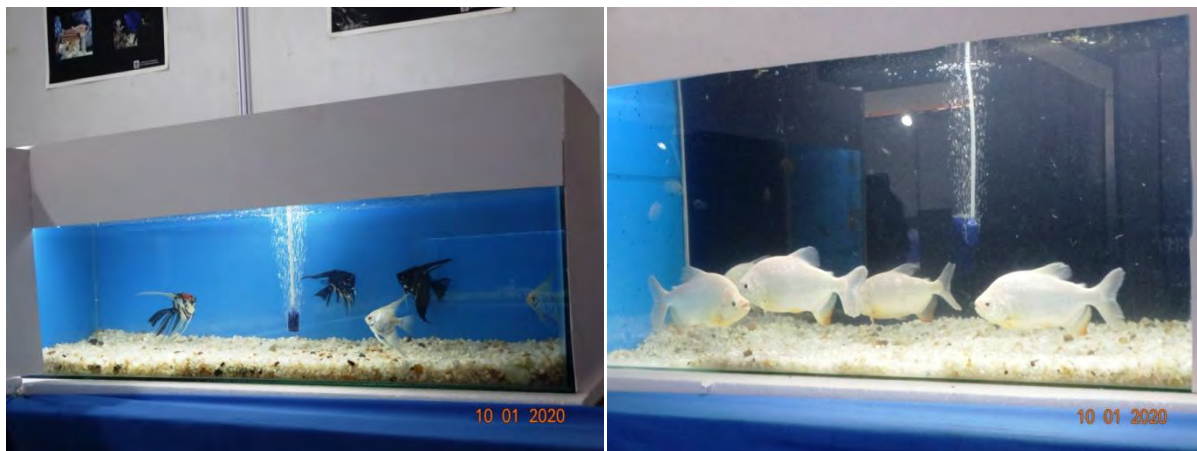


Sixth stall was entirely for the exhibition of craft and gears items. There were traditional crafts, indigenous crafts, life saving equipments, cast nets, models of purse seine boat, trawl nets, floats etc. exhibited.



Seventh stall was stocked with common live bearers like molly, sword tail and platy etc

Eighth stall was exhibits included angel fishes, kissing gourami, sevarum fish and albino carps etc. It was a mixed stall where common ornamental fishes were exhibited.



Ninth stall was filled with albino pacu fish, Oscar fish and koi carp.





Last stall was entirely used as the carrier stall of the department. There a brief history of the department and the carrier opportunities after the course and future higher study options were explained and exhibited.



Beside these exhibits in the entrance there was an artificial pond beautifully maintained for the giant gourami fish and for a group of Koi carps.

Overall students and staff of the Research Department of fisheries and aquaculture worked very hard to conduct the Aquashow 2020 a very successful event as in the previous two aquashow which was conducted in january2017 and January 2018.





16.2 LAB TOUR STALLS

DATE – 9, 10, 11 JANUARY 2020

venu: PAPPALI HALL

In association with Albertian International Education Expo 2020, the department of Fisheries and Aquaculture set up a 'Lab tour' stall at Papali hall for three days. The concept of 'Lab tour' stall intended to educate the public regarding the various live experiments bring undertaking with respect to the concerned area of study. Another highlight of lab tour is the post graduate and undergraduate students demonstrate and explain the various live experiments to public as student teachers. Lab tour provides opportunity for public to interact directly with the material world using the models, live experiments etc. The following exhibits and live experiments set up for viewing.

- **Live zooplankton microscopic view-** live zooplanktons like rotifer, daphnia, moina, artemia, mosquito larvae, bread worm, grindal worm etc. the public can observe and identify the live organisms and their jerking movements through microscope.
- **Live phyto plankton microscopic view-** phyto plankton like Chaetocerus, chlorella, Isochrysis galbana, nanochlorophyceae, brachionous etc.
- **Larval forms of invertebrates-** larvae of crab- megalopa, larvae of alima-squilla, larval forms of shrimps- mysis, zoea and post larvae, and mosquito larvae. The public can observe the shape, size and appendages of larval form in a magnified form.
- **Water quality analysis-** water quality parameters are analyzed through test kit. The parameters like residual chlorine, ammonia, nitrite, and nitrate can be detected from the water.

M.Sc. Applied Fisheries and Aquaculture students, Jayalakshmi, Riya Joy, Nandan Nelson, Shinji Sajeev, Gopika, Mary Shonima, Sandra Thomas, Swathy A.S Atline Martha, Vibina Welfen and Mary Jain demonstrated and explained the importance of zooplankton and phytoplankton in fish larval feeding and its nutrition status to the public and they also demonstrated experiments to find out the nitrate, nitrite, ammonia, residual chlorine from water samples using test kit.

The Incharges of Lab Tour Stalls is Dr. Ginson Joseph & Asst. Prof. Sislave K. S.



16.3 STUDENT EXHIBIT STALLS

STALL No.	CLASS	EXHIBIT
1	I IF	FISH PHARMACY AND SOMETHING FISHY
2	I AQ	FRESHWATER AQUARIUM
3	II if	FRESHWATER AQUARIUM AND PRESERVED SPECIMENS
4	II AQ	HATCHERY MODEL
5	III AQ	FISH SPA
6	III IF	GUPPY STALL / FRESHWATER AQUARIUM

STALL No.1 FIRST YEAR B.Sc. INDUSTRIAL FISHERIES

The 1st B.Sc. Industrial Fisheries students brought out two ideas namely 'Something Fishy' and 'Fish Pharmacy' all bundled into one stall. "Something Fishy" idea served Tuna Sandwich and fresh lime to drink. The sale of sandwiches and sharing the tasty recipe to the public had a very good response. This was the first experience of the students as small time entrepreneurs. The main theme for the expo was Fish Pharmacy. It exhibited various nutraceutical products. The samples were collected from CMFRI. Products that were displayed were of great significance to human health, aimed at reducing diabetes, obesity, hypertension etc. The products were made from seaweed, green mussel etc. The general public were very inquisitive about the products. Tutor Dr.Jithu Paul Jacob supported the students efforts.



Student entrepreneurs with HoD, Dr.Ajith Thomas John and Senior Faculty, Dr. Bijoy V.M.

STALL No. 2 FIRST YEAR B.Sc. AQUACULTURE

1st Year B.Sc. Aquaculture had conducted a freshwater aquarium show as part of the Albertian Expo 2020. The main attraction of the stall was the FLOWER HORN fish which is one of the most beautiful fresh water ornamental fishes, mainly found in Thailand. The main peculiarity of this fish is its having a horn-like projection on its head which makes it more beautiful. They introduced 2

varieties of flower horn namely kamfa and super red dragon. Among these two varieties kamfa is the most beautiful. They also had kamfa fry in the stall. A number of kamfa fry were sold among the students and other visitors. They also maintained Fighter Fish, also a Thailand variety. They got an exciting feel from their first entrepreneurship experience. Tutor, Asst. Prof. Freeda Rebecca Bastian helped the students to maintain this stall over three days.



STUDENT ENTREPRENEURS OF FIRST B.Sc. AQUACULTURE



Flower Horn



Fighter Fish

STALL No. 3 SECOND YEAR B.Sc. INDUSTRIAL FISH & FISHERIES

The students of semester four B.Sc. Industrial Fish and Fisheries exhibited mostly preserved specimens of fishes, crustaceans and molluscs. In addition they exhibited an aquarium tank with the species *Notopterus notopterus* (Bronze Featherback) commonly called Featherbacks or Knife Fishes. Distribution in India in the Indus, Ganges-Brahmaputra, Mahanadi, Krishna, Cauvery, and other river basins in southern India; Found in clear streams and enters brackish waters. Adults inhabit standing and sluggish waters of lakes, floodplains, canals and ponds. Undertake localized lateral migrations from the

Mekong River to floodplains during the flood season and back to the mainstream or other permanent water bodies during the dry season. Common in tanks throughout the greater parts of India. Feed on insects, fish, crustaceans and some young roots of aquatic plants. They had an opportunity to interact with the students of other departments in the college as well as the public who visited the stall. Tutor, Asst. Prof. Sislave K.S. guided them in the preparatory phase and helped them to maintain this stall over the three days of exhibition.



Students of II B.Sc. IF & F maintaining the Stall at AEE 2020

STALL No. 4 SECOND YEAR B.Sc. AQUACULTURE

The students of 2nd year B.Sc. Aquaculture set up a Working Model based on the topic 'Fish Hatchery' for the three day ALBERTIAN EDUCATIONAL EXPO 2020. Aquaculture hatchery model was prepared by II B.Sc Aquaculture students. A fish hatchery is a complex system consisting various unit like brood stock tanks, breeding tank, spawning tank, larval rearing tank, algal culture tank, feed preparation room, storage room and power supply rooms, office and seed packaging room. The public get information about the facilities, operation and design of the hatchery layout. Maria Geethu, Nadiya M.A, Emily Xavier, Tania Joseph, Margarita Honey, Ancy Joesph. Tutor, Dr. Ginson Joseph supported the students during the 3 days of Expo.

The preparatory works started on 5th January 2020. It was done at Valluvalli Ernakulum. Presentation of the model to the public was done entirely by the

students and it provided them an opportunity to express their talents and also it helped them to communicate and convey their ideas.



Students of second year B.Sc. Aquaculture with Tutor Dr. Ginson Joseph and Mr. Jose Kurupathu who assisted the students in fabricating the model

STALL No. 5 THIRD YEAR B.Sc. AQUACULTURE

Fish spa pedicures are just one of the seemingly super weird beauty trends that have entered popular culture in recent years. This beauty treatment is like a pedicure — only in so far as your feet go into a tub of water. From that point on, you're at the mercy of the *Garra rufa* fish — also called "doctor fish" — which according to Dr. Nita Patel, a California-based board certified dermatologist, are a freshwater fish that originally come from Central Eurasian river basins.

The red garra (*Garra rufa*), also known as the doctor fish or nibble fish, is a species of cyprinid that is native to a wide range of freshwater habitats in subtropical parts of Western Asia. This small fish typically is up to about 14 cm (5.5 in) in total length, but locally individuals can reach as much as 24 cm. Pedicures don't just involve getting your toenails painted. They also involve removing dead skin and calluses from the bottom of the foot. The fish,

called *Garra rufa* fish, or sometimes "doctor fish," actually nibble the dead skin from your feet. It involves dipping your feet and part of your legs in water full of tiny, dead-skin-eating fish," she said. "These fish are known for their ability to debride and eat dead skin without drawing blood and injuring intact skin."

The Stall named "SPA ZONE" started on January 9, 9:00 AM and worked until January 11th 5:00PM. They had 2 tubs with 30 fishes in each tub. They provided pebbles, LED lights, aerators and some aquatic plants in the tubs. The minimum time given for a single person was 5 minutes and maximum time allotted was 30 minutes. The people are allowed to dip their foot in normal water and slowly immersed in the tubs with fish. Immediately the fish started sucking the waste matters and dead skin from the customer's foot. Fishes were making a combination of kiss, bite and nibble which gave a ticklish feeling to the people keeping their feet inside the tubs. The visitors were happy and satisfied. Tutor, Dr. Vibin M. encouraged and supported the students in their efforts.



Students of III B.Sc. Aquaculture behind the Fish Spa venture



STALL No. 6 THIRD YEAR B.Sc. INDUSTRIAL FISH AND FISHERIES

The students of the final year B.Sc. industrial Fish and Fisheries organized a “Guppy Stall” for the Albertian Educational Expo 2020 which dated from 9th to 11th January 2020.

Different types of colourful, fancy guppies were exhibited. Neon guppy, Coral guppy, Orange tail and Half Black guppies were the main attractions. The stock was bought from Tropical Aquarium, Valanjambalam. The visitors were mainly children and they found it vibrantly interesting. Orange tail guppy was the most attractive. Charts and posters made the stall very informative. They were able to create an awareness to the visitors to the stall on the aquarium keeping of guppy, platy and molly fishes.

The stall was arranged on 8th evening and the fishes were introduced into the aquarium tank by 9th January morning. The stall was opened by about 10am. It was an overall fresh experience for all the students and they did it with great enthusiasm. Tutor Asst. Prof. Bisi K.Paul supported the students.



16.4 BIOCHEMISTRY LIVE EXPERIMENTAL STALL - SCIENCE LAB OPEN HOUSE

Biochemistry Live Experimental Stall was installed and exhibited the biochemistry live experiments in the Science Lab Open House Section by Biochemistry Division of Research Department of Fisheries and Aquaculture in connection with Albertian International Educational Expo-2020 held on 09.01.2020 to 11.01.2020. It was coordinated by Biochemistry Faculty - Dr. Vibin M. and Ms. Bisi.K. Paul. The major experiments such as Detection of Carbohydrates especially Glucose from Banana, Starch from Potato, Proteins from Egg White and Fats from Peanut Seeds.





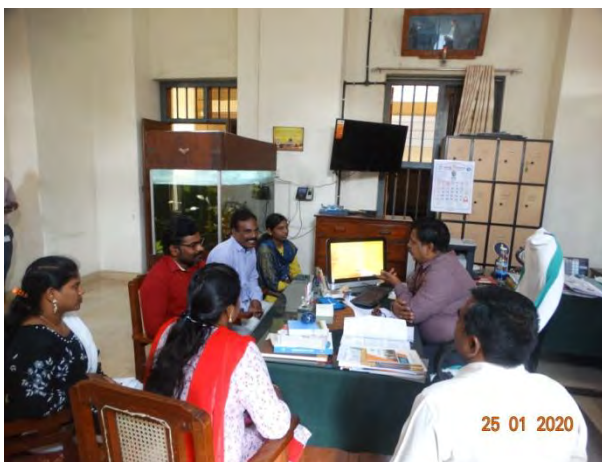
Biochemistry Live Experimental Stall was installed and exhibited the biochemistry live experiments in the Science Lab Open House Section by Biochemistry Division of Research Department of Fisheries and Aquaculture in connection with Albertian International Educational Expo-2020.

17 INTER-INSTITUTIONAL COOPERATION

INTER-STATE STUDENTS VISIT 25/01/2020

A group of 41 students comprising 20 girls and 21 boys accompanied by 4 Faculty Members from the Department of Zoology & Fishery, Government Arts and Science College, Kamareddy, Telegana, visited the department on 25/01/2020. The visit was part of the component “Field and Industrial/Institutional Visit of the Study Tour to study various aspects of “Fishery Technical and Inland Fishery Development in Kerala”. The Principal of Government Arts and Science College, Kamareddy, sent a request letter and the Principal of St.Albert’s College issued the permission letter in consultation with the Head of the Department of Fisheries and Aquaculture.

The group reached the college at 9.00am and the faculty members Dr. T. Malsoor, Dr.K. Ashok, Dr. K.Vanaja and Asst. Prof. D. Srija interacted with the Principal, Dr. M.L. Joseph, HoD Dr. Ajith Thomas John, Senior Faculty Member Asst. Prof. Jose Emmanuel and Dr. Ginson Joseph. Principal explained to them about the departments, faculty and activities of the college.



The students and faculty members then assembled in the Department of Fisheries and Aquaculture where HOD, Dr. Ajith Thomas John, welcomed the gathering and apprised them of the courses and facilities in the department. He also spoke on the status and technological developments in the aquaculture sector of Kerala. Dr. Bijoy V.M. then spoke to them on the institutional support for the aquaculture sector as well as about the nuances in animal health management. Dr. Ginson Joseph spoke on the Processing Sector and the technological advances which enabled the country to become a leading exporter of shrimps in the world.



Dr. T. Malsoor then spoke on the advances in fisheries and aquaculture in Telangana. Dr. K. Vanaja from Telangana then proposed the Vote of Thanks. She



thanked the management of the college and the staff and students of the Department for this opportunity.

The students and faculty were then taken for a tour of the department facilities wherein they visited the Microbiology Lab, Biology Lab, Biochemistry Lab and the Aquarium & Hatchery. Students and staff of the department explained practical exposure obtained from each of these facilities. The students from Telangana then watched the cultural programmes hosted by the students of the college as part of the Albertian Fest on the Open Stage in the college premises.



18 CONSULTANCY

As a follow up on the consultancy MOU with CIAL-GCC for the pilot Fish Farming Project of CIAL, several rounds of discussions were held with CIAL officials in April and May 2019. It was finally decided to introduce Seabass (*Lates calcarifer*) in Pond No. 3 at the Golf and Country Club of the Cochin International Airport Limited. As a preliminary step of pond preparation sufficient quantity of lime was applied in the water body to prop up the pH levels. Assessment of the water quality parameters and general observations of the water body and existing organisms indicated the suitability of the system for culture. The fish fingerlings were procured from the MPEDA-Rajiv Gandhi Center for Aquaculture, Vallarpadom Hatchery and brought to the site with proper aeration on 30th May 2019. On the same day 2190 fingerlings were introduced into the pond in the presence of Mr. Sunil Chacko (CFO-CIAL), Mr. Gopalakrishna C.R. (GM-Civil - CIAL), Mr. Joseph Peter (DGM Commercial – CIAL), Mr. Sabu Thomas (AO-GCC CIAL), Mr. Prem Kumar (GCC CIAL), Dr. Ajith Thomas John (HOD Department of Fisheries and Aquaculture and Coordinating Consultant CIAL GCC-SACA Fish Farming Consultancy Project) and Dr. Bijoy V.M. (Senior Faculty and Associate Coordinator). It was observed that the fingerlings started feeding on the small fishes present in the pond even from the time of introduction. Artificial feeding of the fishes with commercial pellets started from the second day of seeding the pond.



Seabass fingerlings to be introduced for the first time into the culture pond

Right to Left : Dr. Bijoy V.M., Mr. Sunil Chacko, CFO CIAL, Mr. Gopalakrishna, GM Civil, Dr. Ajith Thomas John, Mr. Premkumar CIAL-GCC, Mr. Sunny George, CIAL-GCC



Dr. Bijoy V.M. and Dr. Ajith Thomas John releasing the fingerlings

The fingerlings of size 7cm were fed according to the feeding chart proposed by the MPEDA Hatchery, Vallarpadom. They were fed three times a day at 4hr intervals an equal ration of feed. The feed used was the Growel Brand pellet feeds. Bird lines were installed covering the entire area of pond to prevent the fingerlings from falling prey to the aquatic birds. Regular monitoring of various parameters of the pond water quality was conducted. The water quality parameters monitored include Dissolved Oxygen, pH, plankton concentration etc. Soil quality parameters were also measured from the samples collected using the soil grab. The parameters were analyzed at the National Center for Aquatic and Animal Health, CUSAT and results of the analysis was reported to CIAL on a timely basis. One month into the culture when the size of the fingerlings increased from 7cm to 12cm, rains started and there was a drastic drop in pH which led to plankton death in the pond. This was corrected through application of “Detrodigest” in consultation with the National Center for Aquatic and Animal Health (NCAAH) CUSAT. The culture continued with feed size increased at regular intervals according to the size increase of the seabass cultured.



Feeding the fingerlings from the ramp installed in Pond Number 3



Ramp & FRP Boat in Pond 3



Water Sampling for DO Estimation



Soil Sampling using Soil Grab



Detrodigest Preparation



Detrodigest Preparation



Detrodigest application in pond

pH measurements two weeks after the application of detrodigest and sufficient quantity of dolomite indicated that the plankton population in the ponds were reviving and the pH increased to a desirable level of 7.2. Dolomite application was continued for two more months to compensate for the heavy run-off from the surroundings into the pond due to the inclement weather conditions which could result in a drop in pH level. Biweekly monitoring of the key water quality parameters culture pond was ensured during the entire culture period which extended upto January 15th 2020. M.Sc. Applied Fisheries and Aquaculture student, Ms. Shinji Sajeev undertook her PG dissertation on the topic “Prefeasibility and operational parameters of Seabass culture in an open freshwater system”, which was a case study of the feasibility and operational performance of culturing seabass in Pond Number 3 at CIAL-GCC.

At the end of the culture period the seabass cultured along with other fishes in the pond where harvested. Along with seabas a number of other species like carps, murrels, *Etroplus suratensis*, *Etroplus maculatus* were harvested. The primary culture species Seabass showed sufficient growth rate during the culture period. The average weight of the seabass harvested was 800g. Based on the observations of the culture in the open water system at CIAL-GCC it could be inferred that the water body is suitable for freshwater fish culture operations. Seabass which is a commercial species having the ability to adapt to a wide range salinity showed good survival in the zero ppt salinity at CIAL-GCC pond. The growth rate of the cultured species over the culture period showed that the species was responding well to the feed. Since the pond is having sufficient depth it is advisable to resort to culture methods like cage culture in addition to open water farming.





Asian Seabass *Lates calcarifer* harvested from the pond





19 HATCHERY TRAINING

19.1 UG STUDENTS HATCHERY TRAINING -MALAMPUZHA NATIONAL FISH SEED FARM 2, 3, 4 JULY 2019

Malampuzha: A batch of 64 students of Semester III, B.Sc. Industrial Fish & Fisheries and B.Sc. Aquaculture along with 3 faculty members – Sayeed Muhammed, Sislave K.S, Sameera S started from the college on 2th July, 2019 by around 7.30 am. By 12.30pm the team reached the National Fish Seed Farm, Malampuzha. In the hatchery breeding of carps were carried out. Berried females are an essential component for continuous operation in hatcheries. The hatchery maintains various life stages of fishes to ensure thorough supply of seed whole year round. Several ponds of varying dimensions are being used for the purpose.

The hatchery procedures began with a talk by Mr. Jain (Biologist, National Fish Seed Farm, Malampuzha) explaining the development and activities undertaken by the National Fish Seed Farm, Malampuzha, following which he introduced the farm activities to the students. In the presence of students healthy brooders were caught from 3 of the brood stock rearing ponds which were transported to the breeding center in a happa net. Female and male of *Labeo rohita* were selected for inducing. Induced breeding is conducted at low temperature, calm surrounding and night time injection is ideal and as there had been ample time until then, visited the Malampuzha Fish Aquarium, under the control of Department of Fisheries, Government of Kerala. By 6.30pm returned back to the hatchery to witness the further procedures of injection. Spawning occurs within 3 to 6 hours after second injection to male and female brooders. The students were asked to return back to the hatchery early morning next day to observe the spawn.

The team reported to the hatchery early morning the next day by 6.30 am. Spawning had taken place. Eggs were collected from happa and transferred to a beaker and then into a bucket. Brooders are also weighed by taking out from happa to calculate the approximate number of eggs laid. The eggs were kept in a rectangular meshed mosquito net in order to drain out the water through the net. The eggs were transferred to hatcheries via a beaker of known volume. Percentage of fertilization was counted by taking the number of eggs laid in a 1ml measure of sample and about 10 liters of eggs were obtained. Fertilized eggs of IMC appear like shining glass beads of crystal clear transparency. Unfertilized eggs look opaque and whitish in color. Fertilized egg was transferred to Chinese hatchery running system.



After finishing the hatchery activities, the team visited the Malampuzha Gardens, Dam site, Snake Park and Malampuzha Rock Garden, Athirampilli waterfalls.



B.Sc. Aquaculture and B.Sc. Industrial Fish and Fisheries students visit Malampuzha National Fish Seed Hatchery.



Students and Faculty official Mr. Jain, Biologist, National Fish Seed Farm, Malampuzha



Rearing ponds for Indian Major Carps



Brood Fish Collection and Identification



Salmon Gonadotropin Releasing Hormone Analogue and Domperidone intramuscular Injection for induced breeding in *Labeo rohita*



Artificially created breeding system



Fertilized eggs to Chinese hatchery system



Aquarium Complex Visit



19.2 PG STUDENTS HATCHERY TRAINING - MALAMPUZHA NATIONAL FISH SEED FARM JULY 9,10 AND 11

A Batch of 25 students of final year M.Sc. Applied Fisheries and Aquaculture underwent 3 day training in breeding and rearing of ornamental and food fishes at the National Fish Seed Farm, Malampuzha. Major objective or aim of our practical training is to identify and gain knowledge on Induced breeding or Hypophysation technique in Indian Major Carps. In 1983-84, the Malampuzha seed farm was expanded to the status of National Fish Seed Farm under the Centrally sponsored scheme with Chinese circular hatchery facilities, 91 nursery ponds (1.0157 ha), 22 rearing ponds (0.7176 ha) and 14 stocking ponds (1.1158 ha) for the commercial production of quality carp seeds. At present the annual production capacity of the farm is 1.5 crore seeds per year. During 2017, till September, 4500000 seeds are already produced and sold to fish farmers. The farm has about 20 workers and they are experts in the service with their long period of experience. During our visit, induced breeding was performed in Grass Carp. Healthy fishes of required weight were caught by the workers with large seines. Students also participated in the operation. The selected fish were taken to the farmhouse in a big polythene bags or 'Manchal' and kept in pools with artificial rain for inducing them for quick breeding.

At 6.30 pm, the brooders were selected and start the injection procedure by Sri. Jain Sir. 2 micro gram of hormone was used for a fish of 1 kg body weight of males and the dose is doubled in females. The females of 1 kg were selected for a male of 2 kg body weight.

The injection was carried out just above the caudal peduncle of fish and injected with the help of a micro syringe by keeping at an angle of 45 degree.

The injected brooders were transferred to the breeding tank with facilities for artificial rain. The tank has aerators and water rotating devices. The egg and milt were released to the water and fertilization take place.

About 12 hours after injection, on examination, it was noticed that the fertilized eggs were seen as oil droplets in water and were about 1mm in size. They were transparent also. 6.5litres of eggs were obtained. These eggs were transferred to the hatching ponds provided with running water.



The hatching ponds have two sections. The eggs were kept in the inner section and running water is provided and that will increase the circulation of water as well as air content. As the eggs hatched out, the fries were led to the second section.









20 STUDY TOUR

Final year students of B.Sc. Aquaculture and B.Sc. Industrial Fish & Fisheries of St. Albert's College (Autonomous), Ernakulum went for an eight day study tour to Kollam, Kanyakumari, Tuticorin, Mandapam, Kodaikkanal, Hogenakkal, Ooty for visiting important National Fishery research and educational institutions, harbours, shrimp hatcheries, aquarium, farms, seaweed culture sites, freshwater ecosystems etc. The main objective of the tour was to get practical exposure to the culture techniques of various marine organisms like fishes, oysters, corals, prawns and also to familiarise with different ecosystem like coral, mangrove, estuarine and riverine ecosystem.

The tour started on 7th December 2018 at around 7.00 am under the guidance of the faculty Mr. Jose Emmanuel, Mr. Sayeed Mohamed, Ms Freeda Rebecca Bastian and Mrs. Preethi Francis. 65 students participated in the tour comprising 29 students of B.Sc. Aquaculture and 34 students of B.Sc. Industrial Fish and Fisheries. The following places were visited:

1. 7th December 2019

- Matsyafed Prawn Hatchery & Research Centre, Thirumullavaram, Kollam
- CMFRI Vizhinjam
- Kovalam Beach.

2. 8th December 2019 - Kanyakumari

3. 9th December 2019

- TamilNadu Fisheries University
- CMFRI Tuticorin

4. 10th December 2019

- CMFRI at Mandapam Camp.
- Dhanushkodi



5. 11th December 2019 – Kodaikkanal

6. 12th December 2019 – Hogenakkal

7. 13th December 2019 – Ooty

Return to Kochi on 14th Dec 2019.



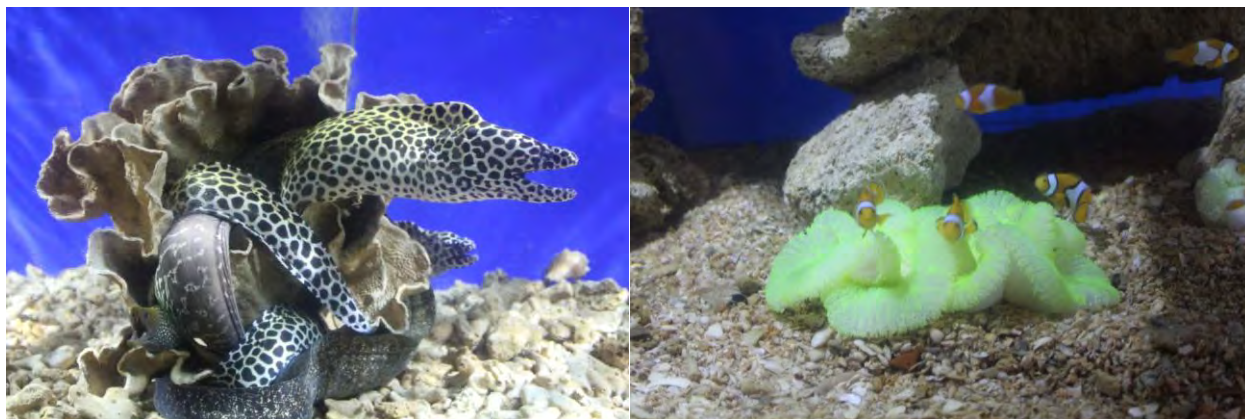
CMFRI VIZHINJAM



TNFU TUTICORIN



CMFRI TUTICORIN



CMFRI MANDAPAM

21 ON JOB TRAINING

ON JOB TRAINING IS A CURRICULAR REQUIREMENT WHEREIN THE STUDENTS ARE ATTACHED TO REPUTED SEAFOOD PROCESSING PLANTS AND CENTRAL GOVERNMENT ORGANIZATIONS FOR A PERIOD OF ONE MONTH AND THE STUDENTS UNDERGO TRAINING IN RAW MATERIAL PROCUREMENT, PROCESSING, QUALITY CONTROL AND MARKETING OF SEAFOOD PRODUCTS, BOTH FOR DOMESTIC MARKET AS WELL AS EXPORT MARKET.

This year in the UG programmes offered by the department, twenty nine students of B.Sc. Aquaculture and thirty four students of B.Sc. Industrial Fish and Fisheries underwent the training for a period on one month in August 2019. The students were attached to Seafood Processing Plants as well as the National Institute of Fisheries Post Harvest Technology and Training, Kochi. In all thirty students from both degree programmes were trained at NIFPHATT. The processing plants to which the students were attached is indicated in the chart given below.

Sl. No.	Name of the Processing Plant	Number of Students
1	ABAD Fisheries, Vypin	2
2	ABAD Fisheries, Chullikkal	2
3	ABAD Fisheries, Munambam	5
4	ABAD Fisheries, Kakkanad	4
5	ABAD Fisheries, Aroor	3
6	CHOICE Seafoods, Palluruthy	3
7	ACCELERATED FREEZE DRYING COMPANY, Ezhupunna	1
8	BABY MARINE INTERNATIONAL, Thoppumpady	3
9	NATIONAL SEAFOODS, Thoppumpady	4
10	BELL FOODS, Thoppumpady	4
11	KAPPITHAN Seafoods, Kollam	2

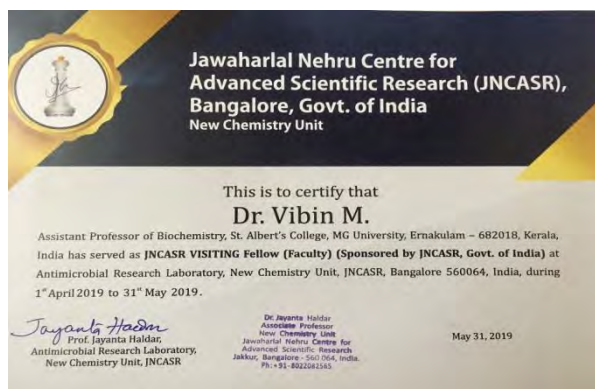
Twenty Five students of the PG Programme in Applied Fisheries and Aquaculture underwent On Job Training at the National Institute of Fisheries Post Harvest Technology and Training, Kochi, for a period of one month during June 2019. They were trained in various aspects of freezing, canning, smoking and drying of fish, microbiology and quality control in processing, production of value added fishery products and domestic marketing.

22 FACULTY ACHIEVEMENTS

DR. VIBIN M.

1. JNCASR Visiting Faculty Fellowship 2019 (April & May 2019)

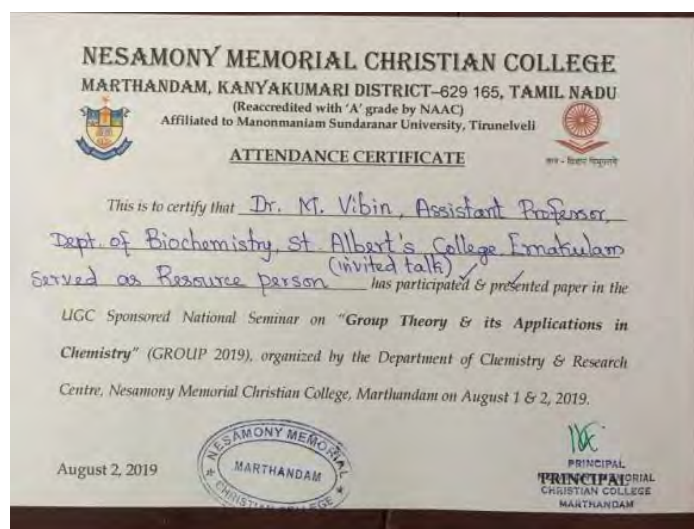
Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has been awarded the JNCASR Visiting Faculty Fellowship 2019, funded by JNCASR (Bangalore), DST, Govt. of India.



Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has been awarded JNCASR Visiting Faculty Fellowship 2019, funded by JNCASR (Bangalore), DST, Govt. of India..

2. Resource Person- UGC Sponsored National Seminar

Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has delivered an invited talk on "Biodistribution and Fluorescence imaging Studies of Near-Infrared-Emitting Quantum Dots by ICP-OES and cLSM" in the UGC sponsored National Seminar on "GROUP THEORY AND ITS APPLICATIONS IN CHEMISTRY" held on 1st and 2nd August, 2019, organized by Department of Chemistry and Research Centre, Nesamony Memorial Christian College (Reaccredited with A grade by NAAC), Marthandam, Kanyakumari, Tamil Nadu, and supported by UGC, Govt. of India



Dr. Vibin M delivered an invited talk in the UGC sponsored National Seminar on "GROUP THEORY AND ITS APPLICATIONS IN CHEMISTRY" held at Nesamony Memorial Christian College, Kanyakumari, Tamil Nadu - 1st and 2nd August, 2019.

3. Selected as SSP Ernakulam District Coordinator

Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has been selected as SSP District Coordinator (Ernakulam) for the year 2019-20 by the NEW INITIATIVES IN HIGHER EDUCATION, Directorate of Collegiate Education, Government of Kerala.

NI.Hedn/15/SEP/2019

NEW INITIATIVES IN HIGHER EDUCATION

DIRECTORATE OF COLLEGIATE EDUCATION

SCHOLAR SUPPORT PROGRAMME DISTRICT COORDINATORS LIST

Sl No	Name of College	Co ordinator	Contact No.	Mail Id	District
1	Govt Arts College,Thycaud	Mr.Ajith Kumar .P	9447245793	ajithkumarjck@gmail.com	Trivandrum
2	BJM College Chivara	Dr.Reshmi Vijayan	9446023167	reshmidileeb@gmail.com	Kollam
3	St.Joseph's College for women, Alappuzha, Pin:688091	Mrs.Anjali George	9633923540	anjuzulicel@gmail.com	Alleppey
4	Govt Arts & Science College,Elanthoor	Mr.Subhash Nair. S	9447345638	subhashmenappalli@gmail.com	Pathanamthitta
5	St Thomas College Thrissur,Pin: 680001	Mr.Joby Sebastian	9744652843	jobysebastian10@gmail.com	Thrissur
6	Govt Victoria College	Dr. John P R	9497314375	johnnedumpal@yahoo.co.in	Palakkad
7	Govt College Mokeri	Mr.Vinod .P.K	9446889084	anujvinodpunathil@gmail.com	Kozhikode
8	Govt College Malappuram	Mr.Hyderali.K	9497661746	hyderkhyder@gmail.com	Malappuram
9	WMO Arts and Science College, Muttill.P.O, Wayanad,Pin:673122	Dr. Yousuf V K	9387806050	Dr.vynadwji@gmail.com	Wayanad
10	GPM Govt College,Manjeravaram	Dr.Shachendran V	9497292772	shachica@rediffmail.com	Kasargod
11	Newman College Thodupuzha,Idukki,Pin: 685585	Mr.Bany Joy	9656491003	bsbany@gmail.com	Idukki
12	St. Albert's College,Banerji Road, Ernakulam, Pin:682018	Dr. Vibin M	8547702076	vbnano@gmail.com	Ernakulam
13	Pazhasasi Raja NSS College, Mattanur,Kannur . Pin:670702	Mrs.Ragi Puthan Veetil	9747575045	ragiputhanveetil@gmail.com	Kannur
14	Sree Vidyadhiraja N.S.S.College Vazhoor, T.P.Puram.P.O, Kottayam,Pin: 686505	Dr.Prita Pillai	8281616377	pillaijprita@yahoo.com	Kottayam

** Submitted to DCE for approval

25/09/2019
Thiruvananthapuram


Dr. K. Murugan
State Coordinator
Scholar Support Programme
New Initiatives in Higher Education
Directorate of Collegiate Education
Govt. of Kerala

Dr. Vibin M appointed as SSP Ernakulam District Coordinator for the year 2019-20

4. Chief Guest & Resource Person- National Seminar

Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has delivered an served as the Chief Guest and delivered an invited talk in the 'National Seminar on 'Environmental Sustainability' held at Department of Chemistry, Holy Cross College (Govt. Aided), Thiruchirappally, Tamil Nadu on Oct 11th, 2019.



Dr. Vibin M delivered an invited talk in the 'National Seminar on 'Environmental Sustainability' held on 11th October, 2019.

5. Paper Presentation (Oral)- International Conference

Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has presented (Oral) his research findings in the 'International Conference on Advances in Chemical and Materials Science (ICCM - 2019) held at Department of Chemistry, Mangalore University, and Karnataka on Oct 17th to 19th, 2019.



Dr. Vibin M presented paper (Oral) in the 'international conference held on Oct 17th to 19th, 2019.

6. Best Paper Award

Dr. Vibin M, Assistant Professor of Biochemistry, St. Albert's college (Autonomous) has been awarded the 'Best Paper Award' the 'International Conference on Advances in Chemical and Materials Science (ICCM - 2019) held at Department of Chemistry, Mangalore University, Karnataka on Oct 17th to 19th, 2019.



**DR. GINSON JOSEPH****1. Organizing Secretary and Resource Person**



2. Rapporteur



ClimFishCon 2020

International Conference on
'Impact of Climate Change on Hydrological Cycle,
Ecosystem, Fisheries and Food Security'

*Jointly Organised by Cochin University of Science and Technology
School of Industrial Fisheries, Kochi and Department of Fisheries, Govt. of Kerala
In association with Govt. of India and Govt. of Kerala*

February 11 - 14, 2020 Cochin, India

**International and National
Advisory Committee:**

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Plymouth Marine Laboratory, UK

Prof. Ola M Johannessen
Nansen Scientific Society, Norway

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Nansen Environmental and Remote
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Professor Ashutosh Sharma
Secretary to the Government of India,
Department of Science and Technology

Dr. Shikhar C. Mande
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(ICAR), New Delhi

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Secretary, Ministry of Earth Sciences

Dr. M.V. Gupta
Former Director, International
Relations, Worldfish Center (CGIAR) &
World Food Prize Laureate and
Member, Executive Committee,
Agri Biotech Foundation

Dr. Dilipkumar
Former Vice Chancellor, CIFE, Mumbai
& Chairman, Technical Committee on
Inland Fisheries and Aquaculture Policy, India

Conference Chair:

Prof. (Dr.) B. Madhusoodana Kurup
Founder Vice-Chancellor,
Kerala University of Fisheries and
Ocean Studies, Kochi.

Co-Chairs (Tech):

Prof. (Dr.) K. Gopakumar
Former DDG (Fisheries), ICAR

Prof. (Dr.) N. Chandramohanakumar
Director, Centre for Marine Biotechnology,
School of Marine Sciences, CUSAT, Kochi.

Secretary General:

Dr. M.R. Boopendranath
Principal Scientist (Retd),
ICAR-CIFT, Kochi.

Organising Secretary:

Prof. (Dr.) M. Harikrishnan
Director SIF, CUSAT, Kochi.

Convenors:

Sri. Dineshan Cheruvat
Joint Director, NIFAM, Dept. of Fisheries,
Govt. of Kerala

Dr. Mini Sekharan
Assistant Professor, SIF, CUSAT, Kochi

Dr. S. Sabu
Assistant Professor, SIF, CUSAT, Kochi.

Treasurer:

Dr. Shibu, A.V.
Assistant Professor, SIF, CUSAT,
Kochi.

CERTIFICATE

Certified that.....*Dr. Ginson Joseph, Asst. Professor*
St. Albert's College, Ennakulam.....

....., has served as Rapporteur in the technical
session 10 B Food and Nutritional Insecurity on
14-02-2020 in International Conference on 'Impact of
Climate Change on Hydrological Cycle Ecosystem,
Fisheries and Food Security' ClimFishCon 2020, held
at Le Meridian, Kochi from 12-02-2020 to 14-02-2020.

Kochi
14-02-2020



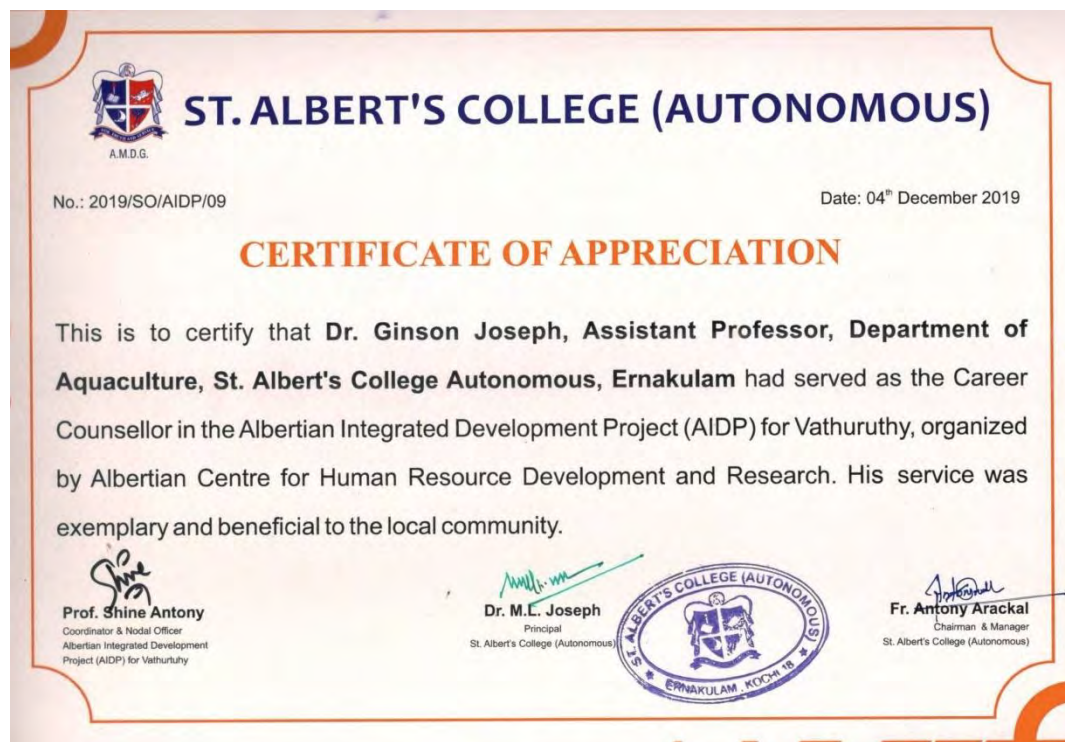
Organizing Secretary
ClimFishCon 2020

Contact details:

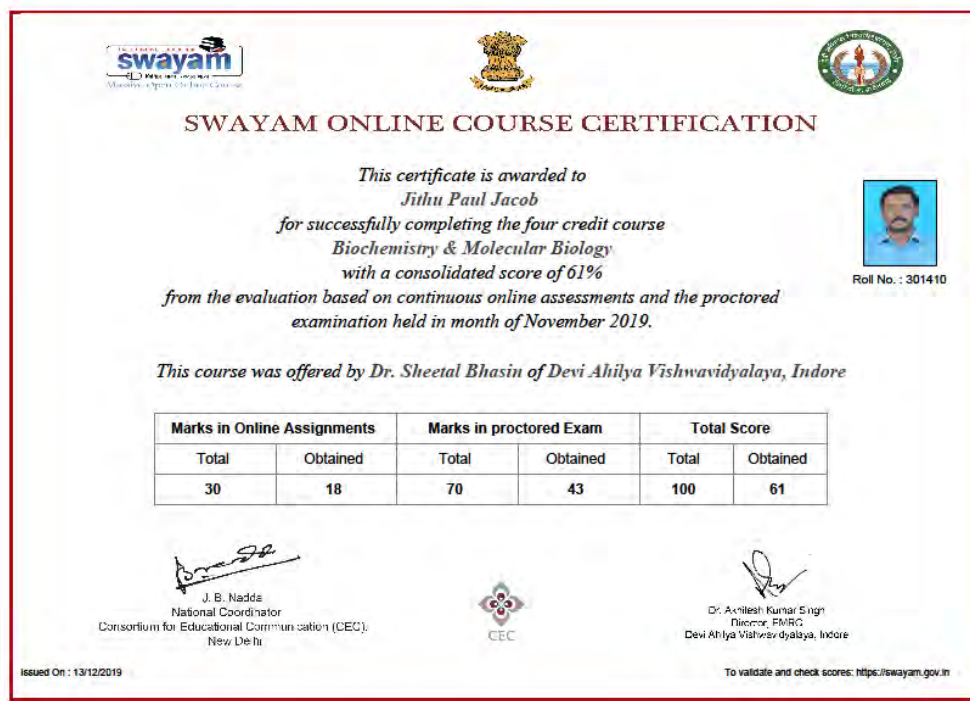
Organising Secretary, ClimFishCon2020
Dr. M. Harikrishnan, Professor, Conference Secretariat,
School of Industrial Fisheries, Cochin University of Science and Technology, Kochi - 682 016, India
Phone: +91484 2354711 Mobile: (i.) +919746604222 (ii.) +919447327804
Fax: +91484 2365952
E-mail: mail@climfishcon.org ; climfishcon@gmail.com ; chairclimfishcon@gmail.com
URL: www.climfishcon.org



3. Career Counsellor



DR. JITHU PAUL JACOB MOOC COURSE



23. FDP PARTICIPATION

23.1 One Week Faculty Development Programme (FDP) on Philosophy of Science in MG University

Dr. Vibin M. has attended the One Week Faculty Development Programme (FDP) for science teachers at MG University from 29th August to 2nd September 2019 organized by The Kerala State Higher Education Council, Govt. of Kerala.



Dr. Vibin M has attended the Pedagogy Workshop for Undergraduate Science Teachers held at MG University from 29th August – 2nd Sep 2019.



Asst. Prof. Freeda Rebecca Bastian and Asst. Prof. Sameera Shamsudheen participated in the FDP on Design Thinking and Idea Pitching



24. DEPARTMENT PUBLICATIONS 2019-2020

ASST. PROF. DR. GINSON JOSEPH

International Publication

J. Ginson, Satyen Kumar Panda, C. K. Kamalakanth & J. Bindu (2020): Changes of microflora in high pressure treated Indian white prawn (*Fenneropenaeus indicus*), High Pressure Research. ISSN: 0895-7959 (Print) 1477-2299 (Online).

To link to this article: <https://doi.org/10.1080/08957959.2019.1708909>

ASST. PROF. DR. JITHU PAUL JACOB

International Publication

Jacob Paul Jacob and Saleena Mathew (2019) Accelerated Shelf Life Study of Fish Oil Stored in Medicinal Plant Extracts. Medicinal and Aromatic Plants (Los Angeles) 8: 334. ISSN: 2167-0412

Chapter in Book

Jacob Paul Jacob Bioconcentration of Marine Algae Using Lipase Enzyme
DOI: <http://dx.doi.org/10.5772/intechopen.87026>

ASST. PROF. SAMEERA SHAMSUDHEEN

International Publications

Sameera Shamsudheen, Ramachandran A, Deepak J and Harikrishnan M (2019). DNA barcoding confirms species substitution of *Parastromateus niger* (black pomfret) using exotic species *Piaractus brachypomus* (Red Bellied Pacu). International Journal of Fisheries and Aquatic Studies, 7(4): 314-320. E-ISSN: 2347-5129 P-ISSN: 2394-0506

Jose D, Mahadevan H, Rozario JV, Pradeep PJ, Maitra S, **Shamsudheen S.** (2019) Targeted species substitution in giant freshwater prawn trade revealed by genotyping. *Aquaculture Research*. 00:1–9. <https://doi.org/10.1111/are.14417>

25. DEPARTMENT QUALITY ASSURANCE CELL

The Department Quality Assessment Cell under the Coordinatorship of Dr. Ginson Joseph, has played a key role in ensuring the maintenance and improvement of quality standards of the department. The files listed by the IQAC as per the NAAC requirements were updated during the year. The AAA Team visited the department and appreciated maintenance of records and gave necessary guidelines for corrective actions. DQAC regularly reported the activities of the department by providing the programme brochure, pictures and report of each programme organized during the year, to the IQAC. The preparation of the Department Quality Assurance Report as per the requirements of the Annual Quality Assessment Report is another important activity of the DQAC. The DQAC also prepares the Result Analysis document and evaluates it to arrive at suitable suggestions to improve the department results. The timely action of the DQAC facilitated the participation of the department in several national ranking schemes representing the institution as a whole. During the year the DQAC Committee convened twice. The constitution of the committee for the academic year 2019-20 was as follows.

Chairman (HOD)	– Dr. Ajith Thomas John
IQAC Coordinator	– Smt. Nisha Thomji Varghese
DQAC Coordinator cum Secretary	– Dr. Ginson Joseph
Subject Expert	– Dr. Harikrishnan M. (Director, School of Industrial Fisheries, CUSAT)
Industrial Expert	– Sri. Jaisingh Joseph (Independent Consultant)
Administrative Officer	– Sri. George P.L.

DQAC Members

- i) Dr. Bijoy V.M.
- ii) Smt. Bisi K. Paul
- iii) Dr. Jithu Paul Jacob
- iv) Smt. Sameera Shamsudheen

**26. STUDENT PROGRESSION****B.Sc. AQUACULTURE (2016-2019) BATCH**

Sl. No.	REGISTER No.	NAME OF CANDIDATE	HIGHER STUDIES	PLACEMENT
1	1601010002	ABHITHA J KARUN	M.Sc. MARINE BIOLOGY, SCHOOL OF MARINE SCIENCE, CUSAT.	
2	1601010003	ADHEENA T M	BANK COACHING, TRIVANDRAM.	
3	1601010004	AISWARYA K B	Not Joined	
4	1601010005	AJEESH FELIX		QUALITY CONTROLLER-KOLUTHARA EXPORTS PVT LIMITES
5	1601010006	ANANDHA PADMANABHAN C S		ENTERPRENUER-ORNAMENTAL FISH BREEDING
6	1601010007	ANJALI T S		CANAAN MARINE PRODUCTS LIMITED - SUPERVISOUR
7	1601010008	ANUSHA SABU	M.F.Sc. IN SEAFOOD SAFETY AND TRADE-CUSAT	
8	1601010009	ASHNY MA	M.F.Sc. IN SEAFOOD SAFETY AND TRADE-CUSAT	
9	1601010010	ASHWIN JOSEPH V	TRAINING - CANAAN MARINE PRODUCTS LIMITED – KOCHI	
10	1601010011	ASWATHY MOHAN	JOINED PONDICHERY UNIVERSITY FOR M.Sc. MARINE BIOLOGY	
11	1601010012	DEEPTHI P D	Not Joined	
12	1601010013	FAREEDA AOUBUKARUGOTHI		TELECALLER, INFOZIGN TECHNOLOGY, INFOPARK, KAKKANAD.



13	1601010014	FARHANA SHIRIN KS	PSC COACHING	
14	1601010015	HENCY MARIA SUNNY	M.Sc. MARINE BIOLOGY –KUFOS, PANAGAD	
15	1601010016	JIYA JAIN	M.Sc. MARINE BIOLOGY- SCHOOL OF MARINE SCIENCE, CUSAT	
16	1601010017	KEVIN JOSEPH MATHEW		PRO-SHRIMP FARMING, CHERTALA
17	1601010018	LAKSHMI S	M.Sc. MARINE BIOLOGY - SCHOOL OF MARINE SCIENCE, CUSAT	
18	1601010019	MARY GREESHMA M J		QUALITY CONTROLLER, KK EXPORTS, KANAMALLI
19	1601010020	MARY JOSHNA K J	Not Joined	
20	1601010021	NIMAL SONY	DIPLOMA IN ITI	
21	1601010022	NITHIN JOSEPH PX		LULU INTERNATIONAL CASIER
22	1601010023	PARVATHY PS		LULU INTERNATIONAL KOCHI
23	1601010024	PHOLOMIN CHRISTEENA	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST.ALBERT'S COLLEGE	
24	1601010025	SANDEEP NS		CONSTRUCTION WORK
25	1601010026	SANEESH C.X		QUALITY CONTROLLER, CHOICE SEAFOODS, PALLURUTHY.
26	1601010027	SHARON T JOHN	PSC COACHING	
27	1601010028	SREELAKSHMI CS	M.Sc. MARINE BIOLOGY-SCHOOL	



			OF MARINE SCIENCE, CUSAT	
28	1601010029	SREYA S PILLAI	ENTRANCE COACHING	
29	1601010030	STENY JOSEPH	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST.ALBERT'S COLLEGE	
30	1601010031	SYAMI V S	PSC COACHING	

B.Sc. INDUSTRIAL FISH AND FISHERIES (2016-2019)

Sl. No.	REGISTER No.	STUDENT NAME	HIGHER STUDIES	PLACEMENT
1	1601360001	ABEY VARKEY K A	SHORT TERM COURSE IN SCUBA DIVING ,KOVALAM, TRIVANDRAM-SCUBA COCHIN-PADI CERTIFICATION	
2	1601360002	AKHILA L		QUALITY CONTROLLER- MALDIVES
3	1601360003	ALDRIN PONSEKA	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
4	1601360004	ALEENA PADUVA		CMFRI PROJECT ASSISTANT , KOCHI -CONTRACT
5	1601360005	ALEN JOSEPH	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE.	
6	1601360006	AMAL C S	Not Joined	
7	1601360007	AMALNADH A S	DIPLOMA IN LOGISTICS MANAGEMENT	



8	1601360008	AMANDA TOM	M.Sc. INDUSTRIAL FISHERIES, CUSAT	.
9	1601360009	AMRUTHA C J	PSC COACHING	
10	1601360010	ANDREWS RODRIGUES		QUALITY CONTROL SUPERVISOR-ABAD FISHERIES,CHULLIKAL
11	1601360011	ANN KARTHIKA RAJAN	M.Sc. IN MARINE BIOLOGY AND FISHERIES, ANDHRA UNIVERSITY VISAKHAPATNAM	
12	1601360012	ANTONY ASHLIN JOHN		QUALITY CONTROL SUPERVISOR-CHOICE SEAFOOD , PALLURUTHY.
13	1601360013	ARJUN V VIJAYAN	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
14	1601360014	ARSHA SAJEEV	Not Joined	
15	1601360015	ASHWIN UDAY		ONLINE QC-CAPITHAN EXPORTING COMPANY,KOLLA M
16	1601360016	ASHWIN VARGHESE P V	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
17	1601360017	ATHIRA K	M.F.Sc. IN SEAFOOD SAFETY AND TRADE-	



			CUSAT	
18	1601360018	ATHIRA T R		QUALITY CONTROLLER – SEABOYS FISHERIES , TRIVANDRAM
19	1601360019	BETSY THOMAS	M.Sc. INDUSTRIAL FISHERIES, CUSAT	
20	1601360020	DEEPAK M D	M.Sc. INDUSTRIAL FISHERIES, CUSAT	
21	1601360021	EVELIN DARIES	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
22	1601360022	FROSHIL SHALOM P F	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
23	1601360023	GEOJITH C GEORGE	PREPARATION FOR HIGHER STUDIES IN GERMANY	
24	1601360024	GOKULA RAJESH J	M.Sc. INDUSTRIAL FISHERIES, CUSAT	
25	1601360025	GOUTHAM S	M.Sc. APPLIED FISHERIES AND AQUACULTURE, ST ALBERT'S COLLEGE	
26	1601360026	HELEN C H		MALIVIDES-FISH EXPORT COMPANY
27	1601360027	JOSEPAUL GEORGE	M.F.Sc. IN SEAFOOD SAFETY AND TRADE- CUSAT	
28	1601360028	KANCHANA S	M.Sc. INDUSTRIAL FISHERIES, CUSAT	



29	1601360029	MOHAMMED SINAN BATHUSHA	CERTIFIED A SHORT TERM COURSE IN SCUBA DIVING-SUBA COCHIN – PADI CERTICATION	BUSINESS IN SAUDI ARABIA
30	1601360030	MUHAMMED SALMANUL FARIZ PI	IAS COACHING	
31	1601360031	NOORJAHAN N	M.Sc. MARINE BIOLOGY, KUROS,PANANGAD	
32	1601360032	RAISON JOHN	M.F.Sc. IN SEAFOOD SAFETY AND TRADE- CUSAT	
33	1601360033	ROSELIN SANDRA HARSHEL	M.Sc. INDUSTRIAL FISHERIES, CUSAT	
34	1601360035	SHARANYA MANILAL	M.Sc. AQUATIC BIOLOGY AND FISHERIES, SCHOOL OF TECHNOLOGY AND APPLIED SCIENCES, PATHANAMTHITTA	
35	1601360036	SIDHARTH	M.Sc. AQUATIC BIOLOGY AND FISHERIES, SCHOOL OF TECHNOLOGY AND APPLIED SCIENCES, PATHANAMTHITTA	
36	1601360037	SNEHA R PAI	M.Sc. INDUSTRIAL FISHERIES, CUSAT	
37	1601360038	STEFIN MANUAL C		QUALITY CONTROLLER, MALDIVES- FISHERY EXPORT COMPANY

**M.Sc. APPLIED FISHERIES AND AQUACULTURE (2016-2018)**

Sl. No.	REGISTER No.	NAME OF THE STUDENT	HIGHER STUDIES	PLACEMENT
1	1702030001	ALBERT KHARMUTTEE	-	-
2	1702030003	ANTONY AMBROSE	-	TRAINEE –MPEDA-HATCHERY AND TRAINING COMPLEX AT VALLARPADAM
3	1702030005	BAKISON MARBANIANG	-	-
4	1702030006	BANKERLANG NONGRUM	-	-
5	1702030007	BEGIUS LYNGDOTH MAWCONG	-	-
6	1702030008	DOUGLAS SHANDI LAMIN	-	-
7	1702030009	HANNATHBI. P	-	-
8	1702030011	JINOY. JOY	-	-
9	1702030012	LAKSHMI. M.S	-	-
10	1702030013	LEON MELCHOIR SHANGPLIANG	-	-
11	1702030014	NANDEESA DAS. K	-	-
12	1702030015	SAJISHNU. U.L	-	-
13	1702030016	SARATH ANIL	-	ENTERPRENUER-ORNAMENTAL FISH BREEDING , MUVATUPUZHA
14	1702030017	SHABANA BOBBY	-	-
15	1702030018	SREEJITH. V.K	-	-



27. STUDENT SUPPORT

27.1 CONVOCATION 2019



The Outgoing Batch 2016-19 of B.Sc. Aquaculture, B.Sc. Industrial fish and Fisheries and M.Sc. Applied Fisheries and Aquaculture (2017-19)



27.2 STUDENT INDUCTION PROGRAMME



Vice Principal Rev. Fr. John Christopher addressing the students



Asst. Prof. Jose Emmanuel HOD Research Department of Fisheries and Aquaculture (Self Financing) addressing the students



27.3 STUDENT PARTICIPATION IN SEMINAR AT CMLRE – 21/09/2019

Center for Marine Living Resources and Environment organized a Satellite Seminar on “Implementing Sustainable Developmental Goal 14” on the theme “Life Below Oceans – Menace of Plastic” as a Curtain Raiser of Swasraya Bharat 19 (SB 19) in connection with the Kerala Science Fest 2019, on the 21st of September 2019. Eleven students from the department comprising B.Sc. Aquaculture, B.Sc. Industrial Fish and Fisheries and M.Sc. Applied Fisheries and Aquaculture, participated in the seminar.





27.4 ONAM CELEBRATION





Onasadhya Preparation by Students and Staff



27.5 ALBERTIAN CULTURAL DAYS



Final Year Industrial Fish & Fisheries students performing



2nd Year Industrial Fish & Fisheries students performing



2nd Year Aquaculture students performing



1st Year M.Sc. Applied Fisheries and Aquaculture students performing

27.6 ENTRANCE COACHING



Faculty member Asst. Prof. Sayeed Mohamed gave specialized coaching for final year students of B.Sc. Aquaculture and B.Sc. Industrial Fish and Fisheries students for the All India CAT Entrance Examination of the CUSAT

27.7 WALK WITH SCHOLAR (WWS)

Walk With the Scholar program was conducted for those students who were performing well in academics. The objective is to the student's personality and soft skills and to direct them towards achieving their goal. The program was hosted at St. Albert's College Autonomous with the support of the Government of Kerala. The sessions for WWS were handled by Asst. Prof. Freeda Rebecca Bastian.

A total of 6 students regularly attended the sessions. They are:

- | | |
|--------------------|------------------------------|
| 1. Suraj S | – B.Sc. Industrial Chemistry |
| 2. Sona K Sunil | – B.Sc. Physics |
| 3. Megha Sunil | – B.Sc. Physics |
| 4. Farzeen A | – B.Sc. Mathematics |
| 5. Pavithra Joseph | – B.Sc. Zoology |
| 6. Arya Anilkumar | – B.Sc. Zoology |



The following classes were undertaken in the Department of Fisheries and Aquaculture:

DATE	TIME	TOPIC
06/08/2019	2pm – 3pm	Basics of Research I
29/08/2019	2pm – 3pm	Basics of Research II
17/09/2019	2pm – 3pm	Discussion of Journal Article
06/12/2019	2pm – 3pm	Writing of a model journal article by the mentees
06/01/2020	2pm – 3pm	Research related opportunities
28/01/2020	2pm – 3pm	Scholarship and Higher education opportunities
31/01/2020	2pm – 3pm	Scholar Review

27.8 STUDENT SUPPORT PROGRAM (SSP)

Student Support Program was conducted for the students on I BSc Aquaculture for providing additional support to the students in their academic activities. This program was hosted at St. Albert's College Autonomous with the support of the Government of Kerala. The sessions for WWS were handled by Asst. Prof. Jose Emmanuel and Asst.Prof. Freeda Rebecca Bastian. The following classes were undertaken in the Department of Fisheries and Aquaculture:

DATE	TIME	TOPIC
19/08/2019	1.45-3.45	General introduction to Ichthyology
30/08/2019	1.45-3.45	Reproductive system in Fishes
16/10/2019	1.45-3.45	Endocrinology of Fishes
06/01/2020	1.45-3.45	Crustacean culture
17/01/2020	1.45-3.45	Molluscan culture

The following students of 1st B.Sc. Aquaculture regularly attended the internal sessions.

1. Rohil Forte
2. Josemon Varghese
3. Reshin Shaji
4. Mohamed Zaheer Khan
5. Shaise Antony
6. Anjala Anju
7. Aparna U Raj
8. Shibla M
9. C S Adithya Narayanan
10. Aneesa A S



The class topics handled were as per the student requirement. The areas and topics which they found difficult were retaken in class. Both lecture and discussion pattern of teaching were made use of. 100% attendance and co-operation were observed from the students' part and considerable level of improvement were seen in the students. Study materials were also distributed among the students.



27.9 OPEN HOUSE

Open House was conducted for the degree students of the department and was well received by the parents. HOD and the Tutors of the respective batches spoke on the occasion and the parents met all the teachers. A feedback was obtained from the parents.



28. ALUMNI ASSISTANCE FOR INFRASTRUCTURE DEVELOPMENT

GIFT FROM ST.ALBERT'S COLLEGE ALUMNI ASSOCIATION,
ST.ALBERT'S COLLEGE AUTONOMOUS (ERNAKULAM)
TO RESEARCH DEPARTMENT OF FISHERIES AND AQUACULTURE
St.Albert's College Alumni Association donated a much needed refrigerator to the Research Department of Fisheries and Aquaculture during the inauguration of the World Science Day Celebration on the 15th of November 2019. The Alumni Association was represented by the President of the Association, Mr. Manu C. Mathew, and the Secretary, Dr. Vijay John Gerson. Mr. Manu C. Mathew addressed the gathering.



29. ALUMNI INTERACTION

29.1 ALUMNI INTERACTION ON 10-10-2019

Mr. Ameenudheen, student of the first batch of B.Sc. Industrial Fish and Fisheries (1996-1999) was invited to the department on the 10th of October 2019. He is a successful businessman in the UAE. HoD Dr. Ajith Thomas John and Senior Faculty Dr. Bijoy V.M. welcomed him to the department. He willingly shared his experiences with the final year UG students motivating them towards entrepreneurship.



Mr. Ameenudheen addressing the students



Jestin M.S. final B.Sc. Aquaculture proposing

Vote of Thanks



29.2 ALUMNI INTERACTION ON 18/12/2019

Mr. Jino Sabu, IF & F 2014-17, working as Research Assistant at ASPIRE Training, Research & Consultancy, Kochi was invited to the department and shared his experiences with both UG and PG students.



Mr. Jino Sabu addressing the UG students



Mr. Jino Sabu addressing PG students

29.3 ALUMNI INTERACTION ALBERTIAN EDUCATIONAL EXPO 2020



Alumni - Asst. Professor Freeda Rebecca Bastian (B.Sc. Aquaculture 2012-15)



Alumni – Dr. Vikas P.A., Subject Matter Specialist, ICAR KVK CMFRI Njarackal
M.Sc. Applied Fisheries and Aquaculture 2013-15



29.4 ALUMNI VISITS TO THE DEPARTMENT



30. INSTITUTIONAL VISIT

30.1 VISIT TO CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

04/02/2020

Time: 11:30AM

Batch: I Year B.Sc. Aquaculture

The Central Marine Fisheries Research Institute (CMFRI) established by the Government of India under the Ministry of Agriculture in 1947 is one of the main Fisheries Research Institute of the Indian Council of Agriculture Research (ICAR), New Delhi. The contribution made by this Institute in fishery biology, fishery oceanography, mariculture, marine biotechnology and other related sciences have been acclaimed nationally and internationally. The research findings of this institute from the past 73 years have helped the nation to make management advisories for sustainable fisheries in several maritime states.

On 4th February, 2020 (Tuesday) CMFRI had celebrated their foundation day and an 'Open House' was arranged in their campus for the benefit of students. 25 students of I B.Sc. Aquaculture were accompanied by their tutor Asst. Prof. Freeda Rebecca Bastian visited CMFRI. The students got an opportunity to observe the scientific activities carried out by this institute.

The following sections were visited by our batch:

1. **Mariculture Section**

Mariculture section was one of the interesting section that we visited in CMFRI. Cage culture, Crab flattening system, Aquaponics, Marine hatchery complex model were the models demonstrated. Also different juvenile stages of fishes, zooplankton, phytoplankton and several instruments like spectrophotometer, centrifuge, multi-parameter unit, TDS meter, digital thermometer, pH pen, tagging were also exhibited there which helps students as well as common people to understand its use and relevance.



2. Biotechnology Section

We were then introduced to the biotechnology section of CMFRI. We were guided by a lab assistant, who explained to us the process of creating fish cell lines. Cell lines provide an important biological tool for carrying out investigations into physiology, virology, toxicology, carcinogenesis and transgenics. She showed us the various equipments and explained the procedures involved in making cell lines.

3. Crustacean Division



Crustacea (phylum Arthropoda), a group of invertebrate animals consisting of some 45,000 species distributed worldwide. Crabs, lobsters, shrimps, and wood lice are among the best-known crustaceans, The CRUSTACEAN DIVISION CMFRI was a worth sight to see. It had an amazing collection of crustaceans of all kinds. From prawn to lobsters to crabs, all varieties were exhibited. We were amazed on the hue collection they had. There were giant lobsters, different varieties of shrimps and prawns both exotic and endemic, the edible species of these crustaceans, blue swimming crab, blood spotted crabs ,mud crabs etc.



The species of prawns, lobsters and crabs were exhibited in aquariums and well as preserved forms. The volunteers there explained on different species, their area of habitat, their niche and much more. They also explained about their availability and endangerment. The larval stages were explained and demonstrated. We also saw different varieties of fishes like perches, flying fishes, dog sharks, seer fishes, elasmobranchs, needle fishes, barracuda and much more specimens.

4. Marine Biodiversity Museum

CMFRI has a marine biodiversity museum which is a 'Designated National Repository' by Government of India. The collections are arranged systematically for a better understanding of the marine biodiversity. Currently the museum



houses 1138 specimen of fin fishes, 154 crustaceans, 487 molluscs, 49 echinoderms, 176 corals, 19 sponges, 20 ascidians, 82 seaweeds, besides 2 dolphin and 3 Antarctic birds. The museum is also a repository of some of the rare collections from the Antarctic region. The fossil remains of Pleistocene era are also exhibited. The museum provides a computerized database of the collections through a user friendly MS Access format.



The visit continued until 2 pm.



1st B.Sc. Aquaculture 2019-22 with their Tutor Asst. Prof. Freeda Rebecca Bastian



30.2 VISIT TO CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

04/02/2020

Time : 11:30AM

Batch : I Year B.Sc. Industrial Fisheries

The Central Marine Fisheries Research Institute was established by Government of India on February 3rd 1947 under the Ministry of Agriculture and Farmers Welfare and later it joined the ICAR family in 1967. The ICAR-Central Marine Fisheries Research Institute (CMFRI) opened its doors to students and public on the occasion of its 71st Foundation Day celebrations on 3rd February 2018 at its Headquarters in Kochi and at 11 Regional Research Centres. The Open House programme evoked a huge response from the student to enjoy the ringside view of marine wonders and to learn the latest developments in marine research.

An industrial visit to CMFRI, KOCHI, INDIA was organized by the Department of Aquaculture on Tuesday, February 4, 2020. Twenty nine students of B.Sc. Industrial Fish and Fisheries accompanied by the tutor Dr. Jithu Paul Jacob visited CMFRI to understand about the latest most demanding technologies in aquaculture. The students were divided into two groups to interact with the experts. We were introduced to techniques of cage culture of *Etroplus suratensis*, crab fattening system, live feed collector, aquaponics, recirculating aquaculture system, types of HDPE nets for cage culture, biofouling in cage, model of marine hatchery complex, model of coastal farm, soil texture analysis by pipette method, uses of sea weeds, remotely operating underwater vehicle (ROV), satellite data, etc. The visit came to an end at 2:00 pm.

It was an informative, interesting and a successful visit. As the students of Industrial Fisheries we understood the applications and importance of Aquaculture. Also we express our sincere thanks to the Head of the Department for arranging such a program and all the team members of CMFRI who had spend their valuable time with us.

The Open House also highlighted the impact of climate change on marine fisheries sector. The research output of the study on climate change carried out under the National Innovations on Climate Resilient Agriculture (NICRA) was displayed to the student on the occasion. The scientists associated with the NICRA project explained the findings of the study to the students. The study indicated that there had been changes in scores of areas such as sea surface temperature (SST), chlorophyll, wind and rainfall, ocean current, spawning

season, maturity, distribution and catch of various marine fishes owing to climate change. The students also displayed keen interest in understanding the functioning of the fish ageing laboratory situated at the Headquarters. The laboratory uses state-of-the-art equipment to find out the age of the fishes and the scientists explained to the students the various stages involved in the process. Models of cage fish farming, aquaponics, ornamental fish farming, recirculating aquaculture system (RAS) etc. were demonstrated to the students. The students also interacted with the scientists and engaged in discussions on the issues and challenges being faced by the marine fishery of the country. Laboratories related to molecular biology, bioprospecting, cell culture, fishery biology, environmental research, climate change, ocean acidification etc. also were opened to the students during the programme.



Students of B.Sc. Industrial Fisheries 2019-22 with the Tutor Dr. Jithu Paul Jacob



31 SPORTS

31.1 INTRA DEPARTMENT SPORTS MEET

DATE : 30.01.2020

VENUE : SPORTS CAMPUS, KALOOR

Intra-department sports meet of the Department of Fisheries & Aquaculture was conducted on 30th of January, 2020 at the St. Albert's College Sports Campus, Kaloor. Before starting the meet a teachers meeting was convened by Dr. Sajeev Jose, Sports meet co-ordinator, to give necessary guidelines and notices about the sports meet. The inaugural function was convened at 8.30 am, started with prayer and welcome speech by Sri. Sivakumar G, sports coordinator, Department of Fisheries & Aquaculture. The athletic meet was inaugurated by Dr. Ajith Thomas John, Head of the Department of Fisheries & Aquaculture which was succeeded by felicitation of the meet by Dr. Sajeev, Assistant Professor, Head of the Department of Physical Education. Soon after the felicitation Joel Roy Paul of II BSc Aquaculture led the oath taking ceremony during which all the students lined up in order to take the oath. Dr. Sajeev Jose, and Sri. Anty, Sports meet co-ordinator gave relevant details of the day's program and necessary instructions including all the rules and procedures and necessary guidelines to the students. Following the official inaugural ceremony a mass run was flagged off by Dr. Ajith Thomas John, Head of the Department of Fisheries & Aquaculture, which was led in the forefront by Ajumal of I BSc Industrial Fish & Fisheries. All the students participated in the mass run.

The sports events began with 1500 mts race for boys. A miscellany of events were conducted which could be categorised into main events and fun games. At the end of the programme Individual Championship was awarded to a boy and a girl who scored maximum points in the meet. The points of fun games and relay were not considered for Individual Championship, even then it was decided that, if at all, there occurs a draw in points between any of the contestants, the points of relay could then be considered for Individual

Championship. Another award of honor decided to be given was Class Championship for the class with maximum points for which the points of both the main events and fun games along with relay were considered. A new addition to the events list was aerobics dance competition, which was the last among the fun games conducted. The rules for the competition were decided to be – a team not less than 10 members for a period of 3 minutes can perform the aerobic dance on any song of their choice and they would be judged on the basis of 4 criterions such as steps, co-ordination, formation and grace.

Following tables show the results of the various events conducted at the sports meet. The first table represents the data of main events and the second table shows the data of fun games.









Winners with Asst. Prof. Sivakumar G. (Sports Convenor) and Dr. Ginson Joseph



Aerobics Dance by Final Year Aquaculture and Industrial Fisheries Students



31.2 INTER DEPARTMENTAL SPORTS MEET



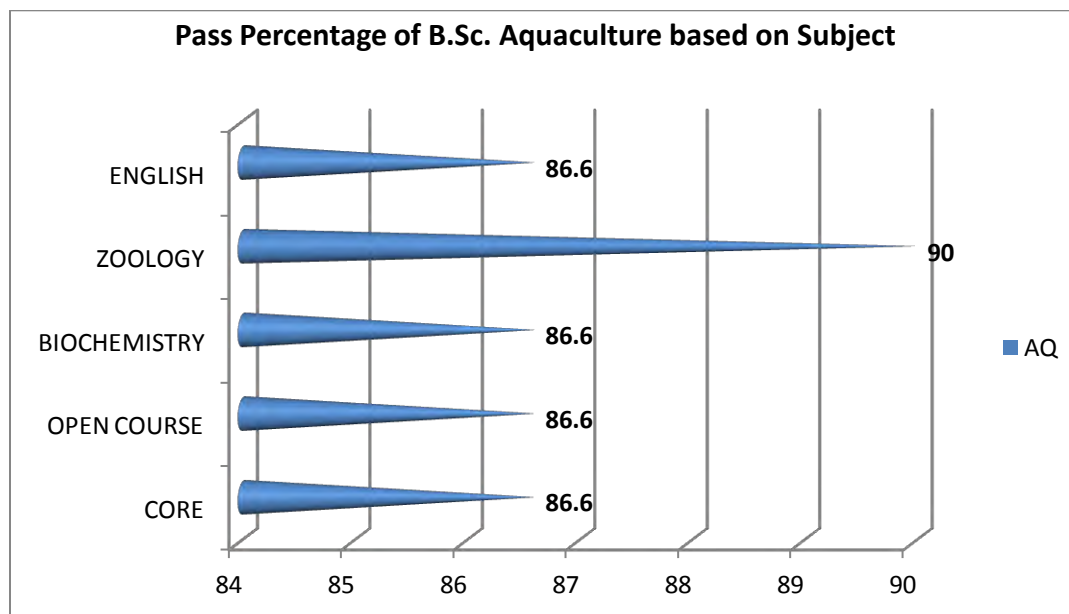
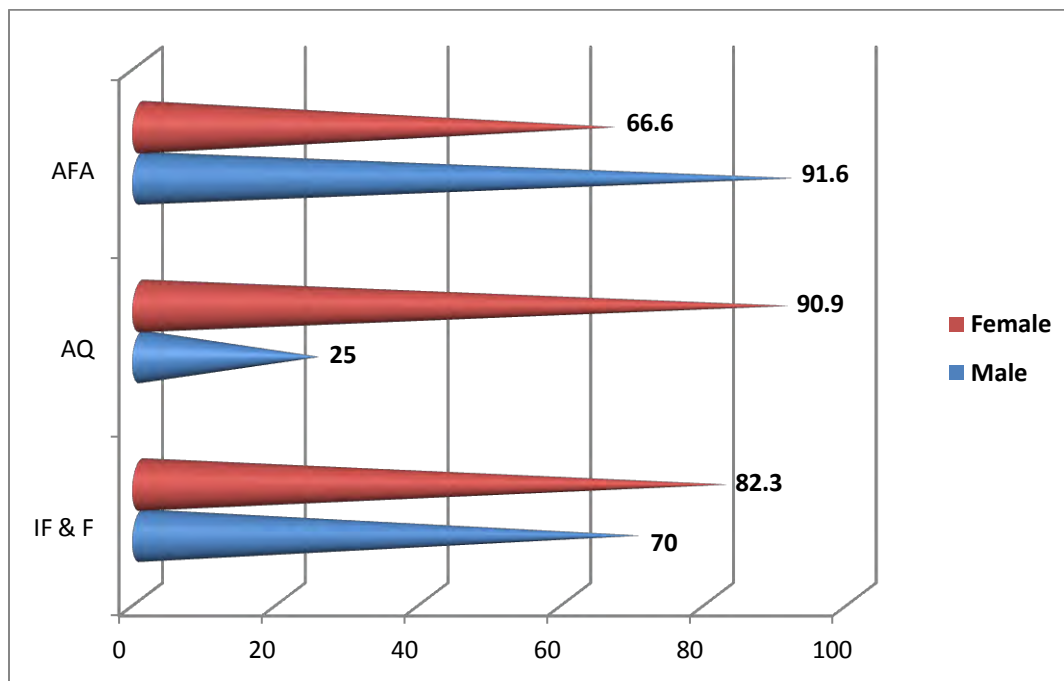


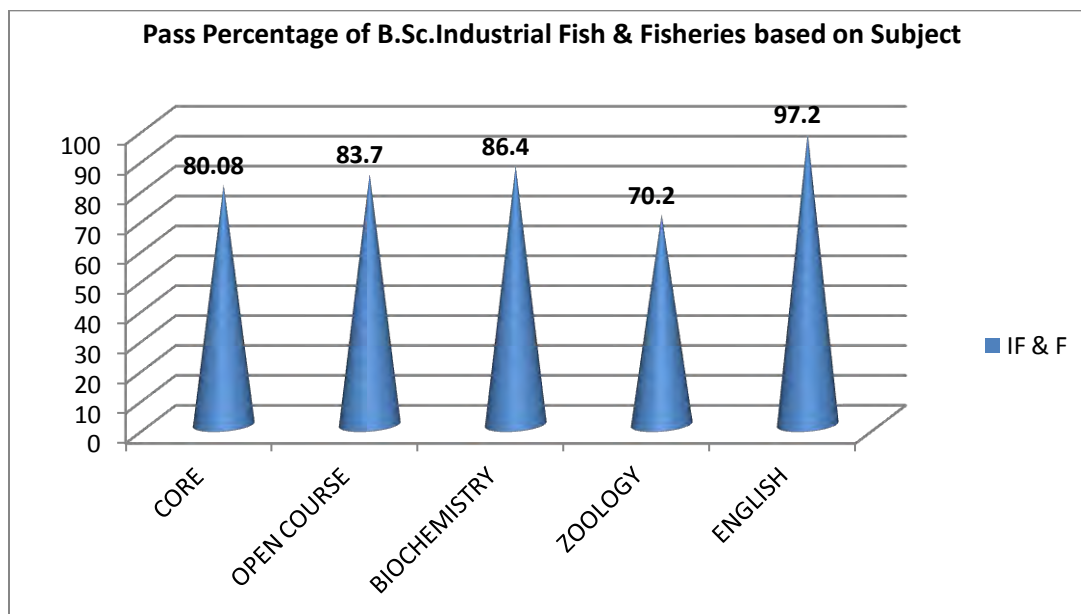




32. RESULT ANALYSIS

**PASS PERCENTAGE - M.Sc. APPLIED FISHERIES AND AQUACULTURE (2017-19),
B.Sc. AQUACULTURE (2016-19) & B.Sc. INDUSTRIAL FISH AND FISHERIES (2016-19)**





AVERAGE ENTRY AND EXIT PASS PERCENTAGE FOR B.Sc. INDUSTRIAL FISH AND FISHERIES (2016-19), B.Sc. AQUACULTURE (2016-19) AND M.Sc. APPLIED FISHERIES AND AQUACULTURE (2017-19)

