CMFRI Headquarters Building
Inaugurated
Dr K. J. Mathew and Shri D. B. S. Sehara, Scientists of CMFRI have been honoured with ICAR Awards for the year 1984.

Dr K. J. Mathew is the recipient of the Jawaharlal Nehru Award for his significant research contribution in marine biology. The award consists of Rs 5,000 as cash, a medal, a certificate and a citation which reads as follows.

"Dr Mathew has worked on the distribution, ecology, and biology of euphasiids. Euphasiids, commonly known as krill are most important elements that contribute to the zooplankton biomass of the oceans. Their speciation as well as knowledge of larval forms of the different species was undertaken. Dr Mathew has applied his knowledge of krill to the southern seas where Antarctica is located. Dr Mathew conducted his research work under the guidance of Dr E.G. Silas, Director, Central Marine Fisheries Research Institute, Cochin".

Shri D.B.S. Sehara, Scientist S-2 was one of the members of the team which received ICAR Award for Team Research in Agriculture for the biennium 1983-84. The team consisting of 32 members led by Dr K.A. Shankaranarayanan of the Central Arid Zone Research Institute, Jodhpur carried out interdisciplinary team work in the analysis of natural and human resources for development planning of Upper Luni Basin in Rajasthan. This work was commended for its high level of excellence with a very good example of integrated team work

(Continued on Page 5)
CMFRI Headquarters Building Inaugurated

IN FRONT OF THE INAUGURATION PLAQUE — Left: Sardar Buta Singh, Hon'ble Union Mi-

nister for Agriculture and Rural Development; Shri K. Karunakaran, Hon'ble Chief Minister of

Kerala; Dr S. Jones, Former Director, CMFRI; Prof. K. V. Thomas, Member of Parliament and

Sri S. Mahadevan, Scientist, CMFRI. Right: Dr N. S. Randhawa, Director-General, ICAR; Dr PSBR

Janes, Director, CMFRI; Shri M. R. Nair, Director, CIFT; Shri K. H. Mohamed, Former Scientist,

CMRFI.
The Country to Gear up
Vessel-based Programmes

Sardar Buta Singh

The Central Marine Fisheries Research Institute has moved to its own campus in Cochin. The five-storeyed laboratory-cum-administrative building constructed at a cost of Rs 3.5 crores with a total plinth area of 91,000 sq. ft. was formally inaugurated by Hon’ble Union Minister for Agriculture and Rural Development, Sardar Buta Singh on 1 March, 1986. Hon’ble Chief Minister of Kerala Shri K. Karunakaran, Prof. K. V. Thomas, Member of Parliament Shri M. P. Joseph, District Collector, Ernakulam and Dr S. Jones, Former Director, CMFRI, were among the chief guests. Dr N. S. Randhawa, Director General, ICAR was also present at the function.

Delivering the inaugural address, the Union Minister stated that the major emphasis on research and development so far has been the exploitation of marine fishery resources and the development of inland fisheries, primarily in fresh water ponds. The technology for induced breeding and polyculture developed by the Central Inland Fisheries Research Institute was very promising and could produce high yields. The CMFRI and CIFRI have also made significant breakthroughs in brackishwater fish and prawn culture. Considering the potential for inland fish culture in the country, the ICAR proposed to set up a Central Brackish Water Fish Culture Research Institute during the seventh plan.

The Hon’ble Union Minister added that the country was gearing up for the exploitation of the Exclusive Economic Zone, which had an estimated potential of 4.5 million tonnes, through vessel-based programmes under the auspices of the Department of Ocean Development. The Hon’ble Minister also assured that such programmes would never come in the way of government’s efforts in developing small mechanised and non-mechanised sectors. Later the Hon’ble Minister unveiled the inauguration plaque by pressing a button.

The Chief Minister of Kerala who presided over the function, called for developing modern fishing methods and said that the fishermen had to be made conscious of these methods.

Speaking at the occasion Dr N.S. Randhawa, Director General of ICAR said that with the objective of improving fish production and conservation of natural resources ICAR has established National Bureau of Fish Genetic Resources and had got the approval of the Planning Commission for setting up an Institute for freshwater aquaculture and a National Research Centre for cold water fisheries, besides the one for brackishwater fish culture. The Director General said that these Institutes would undertake research and exploit the resources of these water bodies. After the reorganization, CMFRI would primarily concentrate on fish stock assessment and sea-ranching programmes. Dr Randhawa also announced that steps had been initiated to develop CIFE as a deemed university.

Dr P.S.B.R. James, Director, CMFRI, welcomed the gathering and Prof. K.V. Thomas, Member of Parliament, Shri M.P. Joseph, District Collector, Dr S. Jones, Former Director of CMFRI and Shri M.R. Nair, Director, CIFT offered felicitations. Dr P.V.R. Nair, Joint Director, CMFRI proposed a vote of thanks.
Electron Microscope Commissioned

Electron Microscopy Laboratory has been set up at the Central Marine Fisheries Research Institute by installing a 'Hitachi' H 600 Transmission Electron Microscope with H 6010 Scanning System. This model is the only one of its kind in India. The Laboratory was inaugurated and the Electron Microscope was switched on by the Honourable Union Minister for Agriculture and Rural Development Sardar Buta Singh along with the inauguration of the Institute's headquarters building on 1 March.

This microscope is capable of magnifying the object to 300,000 times in analytical system and to 800,000 times in ultra high resolution system. This instrument was purchased through the financial assistance from UNDP Project on Post-graduate Agricultural Education and Research.

This EM Laboratory with all sophisticated and essential accessory instruments such as high vacuum evaporator, critical point dryer, ion coater, etc. worth Rs 20 lakhs, is one of the best electron microscopy laboratories in India, according to the engineers who installed the Electron Microscope.

With this added facility CMFRI will further accelerate and enhance the research programmes on reproductive biology, endocrinology, cytogenetics, pathology, etc. of marine finfishes and shellfishes particularly on cultivable species.

Dr K. Rengarajan who has recently undergone training in Japan in operation and maintenance of the EM, is the scientist-in-charge of the Electron Microscopy laboratory.

The Union Minister commissioning the Electron Microscope

(Continued from page 2)

involving the studies in various disciplines like climatology, hydro-meteorology, geology, geomorphology, soil science, land use, land capability and population dynamics. Prior to joining CMFRI Shri Sahara was posted at the Central Arid Zone Research Institute, Jodhpur during which period the above work was carried out.
Drift Bottle Recovered from African coast

The drift bottle released in September 1985 from Madras has been recovered from Mogadisho, Somali, at the Horn of Africa after 174 days showing that the bottle had drifted southwards, towards Sri Lankan coast, then drifted westwards and southwards to reach Mogadisho in Somali, Africa. This is in conformity with surface currents prevailing during the period in the Bay of Bengal and Arabian Sea.

The drift bottles released off Madras were also recovered from Sri Lanka after a period of 40 days. The other places from where they were recovered are Nellore, Sri Hari Kottah, Pondicherry, Cuddalore and Porto Novo. Few bottles have reached Pondicherry within 4 days of release covering a distance of 75 nautical miles.

A few bottles released in May-June from Cochin were recovered from Punnapra, near Alleppey, and Mannar, Puthalam and Negambo in Sri Lanka. The bottles were recovered after 30, 32 and 33 days of release from Cochin at Puthalam, Negambo and Mannar respectively.

The drift bottle release experiments were conducted by Shri D.S. Rao, K.G. Girijavallabhan, T. Dhandapani and Smt. K. Valsala under the leadership of Dr P. Vijayaraghavan.

Training Programme in Oyster Seed Production

A training programme in hatchery production of edible oyster seed was conducted at Tuticorin Research Centre during 17-28 February under the Trainers Training Programme. Eleven officials sponsored by the Department of Fisheries of Gujarat, Andhra Pradesh and Tamil Nadu; Fisheries Colleges of Mangalore, Tuticorin and Cochin; CAS in Marine Biology, Parangipettai and Tamil Nadu Pearls Ltd were trained under the programme.

Training in Seaweed Culture

A short-term training course in seaweed culture was held at Mandapam Regional Centre in February. Two officials of State Fisheries Department, Gujarat were trained under the Programme.

OMISSION

The report on prawn culture in confined tanks in Orissa (CMFRI Newsletter 27 & 28) did not include Sri K.R. Manimadhan Nair, Scientist-in-Charge of Puri Field Centre who co-ordinated the programme and was in liaison with the State Fisheries Directorate of Orissa. The omission is regretted. — Ed.
From the Inauguration Album

The 'thalappoli' getting ready to receive the Chief Guest

The Hon'ble Union Minister for Agriculture and Rural Development Sardar Buta Singh, the Chief Guest is being received by Dr N. S. Randhawa, Director General, ICAR

The Union Minister and the Chief Minister are being led to the dais by the Director General ICAR and Director, CMFRI

Invocation led by Dr V. Chandrika, Scientist, CMFRI

The Chief Guest is being garlanded by Shri T. Jacob, Senior Scientist, CMFRI

Chief Minister of Kerala Shri K. Karunakaran is being garlanded by Dr P. V. Ramachandran Nair, Joint Director, CMFRI
Dr P. S. B. R. James, Director, CMFRI welcoming the gathering.

Dr N. S. Randhawa, Director General, ICAR making the introductory remarks. Seated are Dr P. S. B. R. James, Prof. K. V. Thomas, M. P., Shri K Karunakaran, Sardar Buta Singh and Shri M. P. Joseph, District Collector, Ernakulam.

Union Minister delivering the inaugural address.

The Union Minister releasing the Souvenir by presenting a copy to the Chief Minister.

Dr S. Jones, Former Director of CMFRI giving the felicitation address.

A view of the gathering.
The Chief Minister of Kerala lighting the holy lamp as a mark of entering the new building

Minister and other dignitaries visiting the exhibition organized in connection with the inauguration (1,2,3,4)

The Union Minister putting down his impression on the Visitors' Book
Interview

Engineering in Aquaculture - Dr Wheaton

Engineering assumes great importance in the development of aquaculture, both in open-sea farming as well as inland culture. The structural design in relation to the hydrodynamics and physico-chemical condition of the soil is as important as any other environmental considerations involved in successful culture of aquatic organisms. In India application of engineering knowledge in commercial culture has lagged for several reasons. A large amount of engineering knowledge necessary for aquacultural enterprises is available but the technique has not been specifically applied to aquacultural problems. The main objective of aquacultural engineering research and development is to help in increased production, reducing the cost and human drudgery.

CMFRI which has developed technologies for culture of molluscs, prawn and fish has been paying lot of attention to the development of engineering and instrumentations techniques in relation to the R & D needs through the research projects of the Fishery Environment Management Division as well as the research programmes of CAS in Mariculture.

Dr Fred Wheaton, Professor, Department of Agricultural Engineering, University of Maryland, USA was at CMFRI during February for giving consultancy in aquaculture Engineering. Shri B.S. Ramachandrudu, Technical Officer of CMFRI was the counterpart to the consultant.

Molluscan culture is an area where only very limited engineering talent has been directed. Mooring and raft design are two typical examples of engineering problems in mariculture. Mooring and maintaining the structural integrity in unprotected ocean waters is difficult due to the strong wind and current forces experienced in such a location. Although raft mooring system can be designed for open sea conditions the cost of these systems is often in excess of the returns obtained when the product grown on the raft is sold. A culturist must balance the cost of production at various sites like open sea and protected bay waters with the return from the crop", he added.

Mentioning the recent problems and developments in aquaculture in USA Dr Wheaton said, "there is a shortage of good water supply for aquaculture not only in fresh water but also in salt water areas and; thus there is a great interest in reusing water through recirculating systems. Considerable research is going on in an attempt to improve filtering systems and lower their cost so that water used for culture could be recirculated several times. Attempts are also being made to develop mathematical models describing pond culture systems. Such models are of great value in managing ponds at a minimum cost or for maximum growth rate. Considerable research is also being done to provide higher quality products to the consumer. Some new catfish processing plants
VISITORS

Cochin

Union Minister of State for Agriculture

Shri Yogendra Makwana, Union Minister of State for Agriculture visited Cochin on 11 January. The Director and scientists of the Institute explained to the Minister, the research activities and achievements of the Institute in capture fisheries, mariculture, post-graduate education in mariculture and technology transfer programme with the aid of the exhibition specially organised for the occasion.

Rajya Sabha Committee on Government Assurances

The Rajya Sabha Committee on Government Assurances visited Prawn Culture Laboratory of CMFRI on 30 March. The Committee consisted Shri K. Mohanan, Prof B. Ramachandra Rao, Shri B. Satyanarayana Reddy and Shri M. S. Ramachandran. The work of the Laboratory was explained to the Committee by the scientific and technical personnel attached to the Laboratory. The Committee also visited the Krishi Vigyan Kendra and Trainers' Training Centre of CMFRI.

Tamil Nadu Ministers visit Mandapam

Shri R. Nedunchezian, the Minister for Finance and Shri T. Ramasamy, Minister for Employment and Rehabilitation and Vice Admiral Khurana, Director General of Coast Guard visited Mandapam Regional Centre on 13 January.
MINICOY
Estimates Committee

Study group II of Estimates Committee of Lok Sabha visited the CMFRI Research Centre, Minicoy on 21 January. The team consisted of Prof. Madhu Dhandawade, Shri M. R. Janardhanam, Shri G.L. Dogra, Shri N.N. Mehra, Shri J.C. Malhotra, Shri K.L. Anand and Shri N. C. Gupta. Dr P. P. Pillai, Shri G. Gopakumar and Shri C. V. Mathew, scientists of CMFRI held discussions with them on the tuna fishery at Minicoy, problems on environmental damage and availability of bait fishes. The group also visited the scientific exhibition arranged at the Centre.

KARWAR
Dr M.R. Chandran, Professor and Head of Department of Zoology, Presidency College, Madras.

Prof. S. S. Mandal and Prof. V. B. Kattimani, S.B. Arts and Science College, Bijapur.

Prof. A. D. Marathe, Dr. D.Y. Joshi and Dr V.D. Ranade, Abasar Garware College, Pune.

KAKINADA

The students on study tour from the following colleges visited the centre.

S. V. R. M. College, Guntur.
B. N. S. College, Hyderabad.
Noble College, Machilipatnam
Fisheries Training Institute, Kakinada.

ICAR won the second prize for the best pavilion in the Congress Centenary Celebration Exhibition held at Cochin during December-January. The photo shows (left) Dr PSBR James, Director, CMFRI receiving the Shield from the Chief Minister of Kerala and (right) Inside view of the pavilion jointly put up by CMFRI, CIFT and CTCRI.
Ali India Industrial Trade Fair

Mandapam Regional Centre participated in the XIII All India Industrial and Tourist Trade Fair 1986 at Madras. An exhibition projecting fish culture activities was organised at the Ramanathapuram District Pavilion.

Flower Show at Madurai

The Mandapam Regional Centre participated in the Annual flower show organised by the Madurai Horticultural Society at Madurai during 1-2 February; Cultured pearl, pearl oyster, edible oyster, fish and prawn were displayed in the exhibition held in this connection which attracted very large crowds. The Horticultural Society presented the stall with a certificate and a plaque.

Engagements

Dr P.S.B.R. James, Director, attended the following meetings:

Divisional meeting of Institute's Seventh Plan proposal at ICAR Headquarters, New Delhi, 6 January.

Cruise Planning and Programme Priorities Committee Meeting for Sagar Kanya and Sagar Sampada at New Delhi, 14 January.

Inter-agency Preparatory Meeting for Futurology Workshop on Lakshadweep at Regional Research Laboratory, Trivandrum, 18 March.

World Conference on Trade in Frogslegs vis-a-vis Environmental Considerations organised by MPEDA in association with CIFRI at Calcutta, 10-11 April.

Dr P. S. B. R. James, Director to serve as:

Member in the High power Committee on Management of Marine Fishery Resources constituted by Ministry of Agriculture.

ICAR representative in the Academic Council of Cochin University of Science and Technology.

Member in the committee on Productivity from Aquatic Resources constituted by Ministry of Agriculture.

Member in ICAR Regional Committee No. 8 for 3 years from September 1985.

Shri M. Kumaran, Scientist S-3 has been nominated to serve as a member in the Task Force for Implementation of recommendations of Steering Committee at district level, Calicut, constituted by Government of Kerala.

Dr P. Parameswaran Pillai has been nominated to serve as a member in Lakshadweep Wild Life Advisory Committee.

Seminars and conferences

The Director and the Scientists of CMFRI participated in the ICAR co-sponsored Seminar on Education and Training for Marine Fisheries Management and Development organised by CIFNET during 28-30 January. The Director presented a paper entitled "the potential marine fisheries resources and possibilities of exploiting the same to increase marine fish production".

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT 'CMFRI NEWSLETTER'

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I, Krishna Srinath, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dated 31-3-'86

Sd/-
The Director and Scientists of CMFRI participated in the Seminar on Mussel Watch at the School of Marine Sciences, Cochin, 13-14 February.

Dr. Shyamal Banick, Scientist S-1 attended the 73rd session of Indian Science Congress at University of Delhi, New Delhi, from 3-8 January and presented a paper entitled "Diazotrophic activity and ferric sulphate mineralizing ability by estuarine sulphate reducing bacteria."

**Appointments**

Dr. S.C. Mukherjee, as Scientist S-3 at Cochin on transfer from IVRI, Izatnagar, 25 March.

Shri K.C. George as Scientist S-2 at Cochin on transfer from IVRI, Izatnagar, 24 March.

**Scientists S-1**

Shri P.K. Krishnakumar, 19 February.

Shri P.C. Zachariah, 19 February.

Kumari Puthran Prathibha, 20 February.

Shri C. Gopal, 22 February.

Shri Veerendra Veer Singh, 25 February.

Shri K.K. Philipose, 28 February.

Smt. V. Kripa, 3 March.

Shri M. Ferozkhan, 3 March.

Kumari P.T. Sarada, 3 March.

Shri Sunilkumar Mohamed, 5 March.

Shri M. Karthikeyen, 6 March.

Shri Abhay Kanth Pathak, 12 March.

Shri Bipin Bihari, 14 March.

Shri P. Jayasanker, 18 March.

Shri K. Vijayakumaran, 18 March.

Kumari Manpal Kour Sanhotra, 22 March.

Kumari S. Jasmine, 24 March.

Shri Ajay Kumar Pandey, 27 March.

Shri Manas Kumar Bandhyopadhyay, 2 April.

Shri P.K. Asokan, 11 April.

Shri M.B. Renukumar as Field Assistant (T-1), 1 January.

**Promotions**

Shri Edwin Joseph, Library Assistant (T-II-3) as Senior Librarian Assistant (T-II-3) at Cochin, 27 January.

Shri R. Athipandian, SS Grade III (Fieldman) as Field Assistant (T-1), 3 January.

Shri K. Shanmugha Sunderam SS Grade II (Fieldman) as Field Assistant (T-1) at Tuticorin, 3 January.

**Transfers**

Dr. E.G. Silas, Scientist S-5, from Cochin to Madras.

Shri G.P. Kumaraswamy Achary, Scientist S-1 from Cochin to Vizhinjam.

Smt. Geetha Bharathan, Scientist S-2 from Kovalam Field Centre to Madras.

Shri S. Lazarus, Scientist S-2 from Calicut to Vizhinjam.

Dr. T. Appa Rao, Scientist S-2 from Veraval to Bombay.

Shri K.M.S. Ameer Hamza, Scientist S-2 from Mandapam to Tuticorin.

Dr. N. Gopinatha Menon, Scientist S-2, from Calicut to Cochin.

Smt. Mary K. Manisseri, Scientist S-2 from Narakkal to Cochin.

(Continued on page 15)

**Retirements**

Dr. M.J. George, Senior Scientist and Joint Director of CMFRI, retired from the services of I C A R on 31 January. Dr. George's contributions to the research and development of the Institute are highly valuable.

Dr. George joined CMFRI in 1950 at Mandapam and later, on the opening of the Prawn Research Unit at Narakkal, was posted there as research assistant to work with Late Shri M. Krishna Menon. Ever since, Dr George continued at Cochin and earned his promotion and professional advancement in the field of crustacean fisheries. Dr George had his higher training in shrimp biology research in USA in 1961 and had visited USA, Bangladesh and Maldives representing India in his professional field. For a period of about 9 years he worked on deputation as Senior Scientist at the National Institute of Oceanography and headed the Biological Oceanography Division. In 1978 he returned to CMFRI as Head of the Crustacean Fisheries Division. In 1984 he became the Joint Director of the Institute.
Dr George is a leading carcinologist of international repute and has more than 100 published papers to his credit.

Dr P. Vijayaraghavan, Scientist S-3, 31 December 1985.

Shri Waman Shetty, SS Grade III (Labrary Attendant), 31 January.

Relief

Shri A. K. Roy, Scientist S-1 on transfer to CIRG, Makhdom, 5 February.

(Continued from page 14)

Shri K. Rengarajan, Scientist S-2 has been awarded Ph.D. degree by Kerala University for his thesis 'Studies on Siphonophora of the Indian Seas'. He has done his research on this very peculiar group of marine animals under the guidance of Dr E. G. Silas.

Mandapam Centre celebrates Club Day

The club day of the Recreation Club of Mandapam Regional Centre was celebrated on 25 March.

Dr P.S.B.R. James, Director, CMFRI who was the chief guest at the function released a souvenir entitled 'Mandapam and

Ph.D Awarded

CMFRI JOINT COUNCIL CONSTITUTED

The Joint Council of CMFRI has been constituted with the following Members. The tenure of the Council will be for 3 years from 4 January, 1986.

OFFICE SIDE

1. Dr. P.S.B.R. James, Director : Chairman
2. Dr P. Vedavyasa Rao, Sci. S-3 : Member
3. Dr K. Radhakrishna, Sci. S-3 : Member
4. Dr K.C. George, Sci. S-3 : Member
5. Assistant Accounts Officer : Member
6. Senior Administrative Officer/ Administrative Officer : Secretary

(Official side)

STAFF SIDE

(a) Technical Group:
1. Shri K. Soman, Technical Assistant (T-II-3) : Member
2. Shri M. Abdul Nizar, Field Assistant (T-1) : Member
3. Shri H. Kather Batcha, Technical Assistant (T-I-3) : Member
4. Shri Joseph Andrews, Technical Assistant (T-II-3) : Member

(b) Administrative Group:
5. Shri A.K. Balakrishna Pillai, Supdt. (Staff side) : Secretary
6. Shri B. Vijayakumar, Senior Clerk : Member

(c) Supporting Group:
7. Shri A.P. Sebastian SS Grade II (Peon) : Member
8. Shri K. Muthuramalingam SS Grade IV Lab. Attendant : Member
9. Shri K. Ganesan, SS Grade II (Watchman) : Member

Shri H. Kather Batcha has been elected as the Member to the Central Joint Staff Council at ICAR.
ICAR Interzonal Athletics- CPCRI Bags Championship

The Fifth Inter-Zonal Athletic Meet of Indian Council of Agricultural Research, New Delhi for 1985 was hosted by the Central Marine Fisheries Research Institute at Cochin during 21-22 March. The Meet was inaugurated by Shri D. Jayachandran, Chairman and Managing Director, Cochin Shipyard Ltd., in the traditional Olympic style with pomp and gaiety.

Competitions were held for ten events in athletics and seventy eight athletes who held first and second positions in the zonal tournaments, representing twenty three ICAR Institutes vied for honours.

The closing ceremony of the Meet was chaired by Shri P. K. H. Tharakan, IPS, Deputy Inspector General of Police, Central Range, Kerala who also distributed the prizes to winners.

Shri Jacob Kurien of Central Plantation Crops Research Institute, Kasaragod emerged as the fastest man of ICAR and bagged the individual Athletic Championship for the year '85. The Central Plantation Crops Research Institute having won 26 points in the Meet qualified to win the coveted G. K. Kurien Memorial Rolling Trophy.

The runner-up position was won by the contingent of the Indian Agricultural Research Institute, New Delhi which bagged the newly introduced rolling shield.