



CMFRI newsletter

Number 10

1979 & 1980

THE LAB - TO - LAND PROGRAMME



Mussel culture raft being moored to the culture site.

The ICAR completed 50 years of useful service to the nation in 1979 and as a major programme of its Golden Jubilee Celebrations decided to organise an Experimental Transfer of Technology Programme-the LAB-TO-LAND.

The notable feature of this

programme is the direct participation of the scientists at the ICAR research institutes and agricultural universities in the transfer of new and improved technologies aimed at increased production. The beneficiaries have rightly been identified as the small and marginal farmers and landless labourers, with

special attention to the Scheduled Castes and Tribes.

The CMFRI is one of the first institutes under the fold of ICAR which decided to launch the programme in all seriousness and made an early start right from January, 1979.

Dear Colleague,

The publication of the CMFRI Newsletter which was a regular feature was unduly delayed in the recent past. I am glad to inform you that we are reviving the Newsletter to keep our staff fully posted about the ongoing activities of the Institute, projected programmes and staff news.

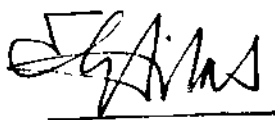
Since there has been a time lag in the issue of this Number, highlights of activities for the intervening period have been updated in this issue.

For the successful running of the Newsletter it will be very necessary that our staff working at Headquarters and subordinate establishments of the Institute take an active interest in keeping the Headquarters informed about local activities which will not only cover research highlights, but include items such as activities of the recreation club, participation in sports and games, distinctions to children of staff members, participation in extension programmes and

so on. The Officers-in-Charge will also keep the Headquarters informed about matters which should find a place in the CMFRI Newsletter.

From its inception upto the last number, Shri K.N. Krishna Kartha has been responsible for bringing out the Newsletter. We appreciate his efforts in making the CMFRI Newsletter an attractive publication of quality. Smt. Krishna Srinath who has joined the Institute at Headquarters as Extension Officer is now entrusted with the responsibility of compiling and editing the Newsletter from this issue onwards. All materials for publication in the Newsletter may be sent to her by name.

The all round co-operation from our staff is needed to successfully run the Newsletter and may I look forward to have your help and support.



E. G. SILAS
Director

Technology Package

The main theme of the Institute's programme is *coastal aquaculture* in which the Institute has made very significant advances during the last eight years. The technologies recommended to the fishermen and fish farmers, including agricultural farmers who came forward to take up aquaculture,

were intensive culture of marine prawns, polyculture of fishes and prawns mussel farming, edible oyster culture and seaweed culture. In this Programme due attention was given to develop crop-livestock-fish integrated farming practices suitable for different locations.

The Institute has selected

a total number of 312 families which include 122 Harijans at Valappu forming a Welfare Society, 30 fishermen at Elathur, 15 agricultural farmers and wage earners at Thekkumbhagam in Quilon District, 15 fishermen at Tuticorin, 20 fishermen at Mandapam, 50 fishermen at Karikattukuppam, 50 Harijans at Muttukadu near Madras and 10 fishermen at Karwar. Thus a cross section of economically backward segment of the society was adopted for providing the benefits of technology under the Lab-to-Land programme.

Dr. M. S. Swaminathan Inaugurates

The Lab-to-Land Programme on prawn culture at Valappu near Cochin was inaugurated by Dr. M. S. Swaminathan FRS, Director-General of ICAR on 13 March, 1979. The programme of polyculture at Thekkumbhagam village near Quilon was launched by Shri Baby John, Hon'ble Minister for Revenue, Government of Kerala on 12 April, 1979. Shri G. R. Edmund, Hon'ble Minister for Food and Fisheries of Government of Tamil Nadu inaugurated the mussel culture programme at Karikattukuppam near Madras on 7 April, 1979. The Oyster culture programme at Tuticorin was inaugurated by Shri R. Shanmugham, District Collector Tirunelveli on 10 May, 1979 and the one on seaweed culture at Mandapam Camp was launched by Shri S. Subramaniam, District Collector, Ramanathapuram. The mussel farming programme at Calicut was inaugurated by Shri. K. M. Balakrishnan, District Collector, Calicut. The most recent one

taken up was mussel culture at Karwar started in November 1980.

Steady Progress

All the programmes made steady progress during the years 1979 and 1980. Several harvests of prawns and fishes were taken at Valappu and the farmers were extremely satisfied with the results. They decided to convert all the available common marshy fallow land into productive prawn culture ponds. The prawn culture technology was quite new to the farmers in Quilon district. Harvests of other products were taken by the farmers at various centres. The programme during the two years has made a good area impact in the regions of operation.

The scientists engaged in the Lab-to-Land programme

met the farmers and district authorities involved with the operation of schemes like IRDP, SFDA, DPAP, etc. at a workshop held at Cochin and Mandapam Camp during July, 1979 and made an interim assessment of the progress and constraints of the whole programme, based on which action plans for future have been developed.

At Karwar

Karwar, along the Uthara Kannada coast of Karnataka is one of the important centres for the production of green mussel, *Perna viridis*. Under the Lab-to-Land programme a project on mussel culture was initiated in November 1980 at Karwar. The fishermen at the village Binage were interested in carrying out mussel farming as an additional voca-

tion. Ten fishermen families in the village were selected and the benchmark survey on the socio-economics of the village as a whole and the selected families in particular was completed. The fishermen were given training in mussel farming including in aspects such as location and collection of seed, fabrication of raft, seeding, and suspension of ropes and maintenance of the farm. Four rafts have been fabricated and moored by the fishermen at Karwar and they are doing the work with great interest and much expectation.

Dr. M. V. Pai and his team are working closely with the fishermen in the project. Dr. P. S. Kuriakose is providing all technical support to the project based on his wide experience under the Lab-to-Land Programme at Elathur near Calicut.

Bumper catch of anchovies at Mangalore

A record catch of 4186 tonnes of anchovies was landed with in a short span of about a fortnight during October-November, 1980 from the purse-seines operated from different centres along the South Canara coast. Of these, the bulk of 3087 tonnes was landed at Mangalore and 657 tonnes at Malpe. This heavy landings of anchovies have been beneficial to the purse-seine fishermen, especially at a time when they were not getting enough mackerel for their effort.

Among the anchovies landed about 80% was contributed by *Stolephorus devisi* and the rest composed of *S. bataviensis*, *S. buccaneeri* and *S. macrops*.

The anchovies fetched a price ranging Rs. 700 to Rs. 1,500 per tonne in fresh condition. They are usually sundried and marketed at different

places such as Trivandrum.

The number of purse-seines operated at Mangalore is about 50.



Anchovies catch - from landing centre to the market.

Indian White Prawn Can Spawn Repeatedly Within a Short Period

The Indian white prawn, *P. indicus* can now spawn repeatedly within short periods. When the adult prawns collected from the culture ponds were subjected to unilateral eye ablation and kept in special pools containing circulating seawater they attained maturity and fully spawned viable eggs within ten days. After spawning the very same prawns rematured and spawned again repeatedly at intervals of 5-20 days. This would go a long way in the process of largescale seed production for developing prawn culture among coastal farmers.

Indigenous Food for Prawn Larvae

Frozen diatoms and rotifers have been successfully used in rearing various stages of penaeid

prawn larvae. The dependence on the costly *Artemia nauplius* for feeding the mysis and post larval stages of prawn has been completely given up. In the new system the prawn larvae from protozoa I to mysis III stages are fed entirely on a mixed culture of diatoms dominated by *Chaetoceros sp*; post larvae I – IV are reared on phytoplankton and frozen *Brachionus* and postlarve V and above are given frozen *Moina*. The use of frozen and stored plankton has simplified the logistics of feeding since the culture of food organisms need not be synchronised with larval rearing operations.

Human Chronionic Gonadotrophin useful in Mullet Breeding

Success has been achieved in induced breeding of mullets *Liza parsia* with pituitary extracts along with human chro-

nionic gonadotrophin. In the experiments conducted at the Prawn Culture Laboratory of CMFRI viable eggs were obtained as a result of the hypophysation and eggs from one specimen hatched out successfully yielding 4500 larvae.

Submersible Raft For Mussel Culture

A special submersible raft has been designed and fabricated for mussel culture at the operational Research Project, Kovalam. Submerged raft made of ten bamboo poles fixed on a teak-wood frame on which 150 ropes can be suspended in the open sea, has been found to withstand rough sea conditions. The rafts are buoyed by conical floats of oil drums. Success of the experiment will enable open sea mussel culture all the year round. This is an improvement over floated raft which gets exposed to variable winds and severe cyclonic storms.

KVK Prawn Culture Training (1977-80)

Year	No. of training courses	Number of farmers trained			Total
		Men	Women	SC	
1977	3	30		6	30
1978	16	198	70	77	268
1979	17	229	116	132	345
1980	17	209	76	107	285

Publications released

A. Krishi Vigyan Patrika:

No. 1. Krishi Vigyan Patrika for mariculture	— English
No. 2. —do—	— Malayalam
No. 3. Marine prawns suitable for culture	— Malayalam
No. 4. Prawn filtration	— Malayalam
No. 5. Grow more prawn	— English
No. 6. The Pearl spot <i>Etroplus Suratensis</i>	— Malayalam

B. Narakkal KVK Leaflet:

No. 1. KVK concept of LAB-TO-LAND	— English
No. 2. Role of women in prawn seed collection-an appraisal by the Krishi Vigyan Kendra, Narakkal	— English
No. 3. Scientific prawn culture from LAB-TO-LAND	— Malayalam

CMFRI RESEARCH VESSEL LAUNCHED

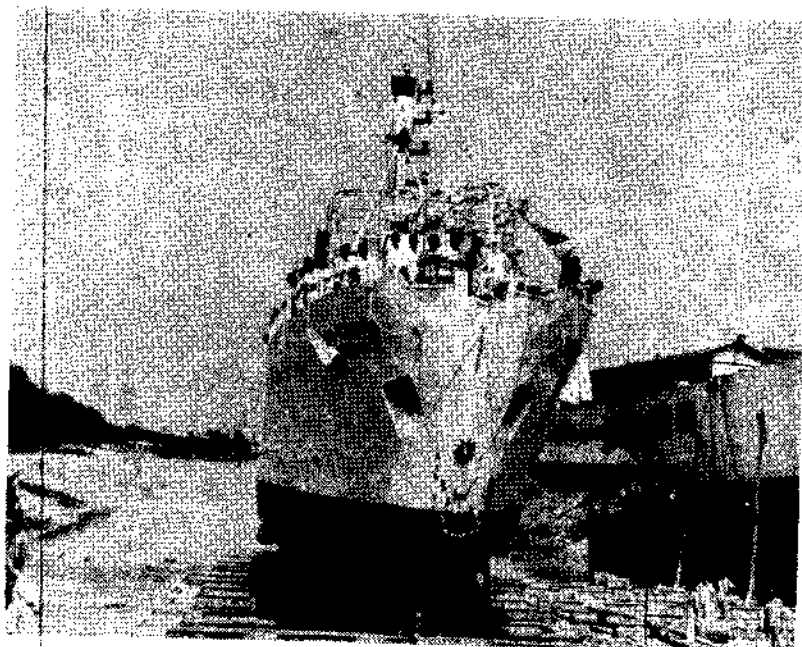
RV SKIPJACK, the first Research Vessel of CMFRI was launched at Calcutta on 7 November, 1980 at a simple ceremony attended by Dr. E. G. Silas, Director of the Institute. The keel of the Vessel was laid earlier by Dr. M. S. Swaminathan to fulfil the longfelt need of the Institute. The Vessel is built by Garden Reach Shipbuilders Engineers at a cost of over 2 crores of Rupees. This 107' Vessel is powered by 750 HP Garden Reach Mann Engine. It has an accommodation for five scientists and a crew of 11 members and an endurance of 25 days. The Vessel is provided with hydraulic deck machinery imported from Norway and can do purse - seining, midwater and bottom trawling at a depth of 1000 metres. She is being fitted up and will be ready for fishing trilas by May



Mrs. Meera Sarkar (w/o Commodore A. K. Sarkar, Chairman & M. D. GRSE, Calcutta) applying tilak on R. V. Skipjack at the launching ceremony.

1981. Regular cruises are expected to commence from June. The Vessel will be used for

research in fishery hydrography over the entire Exclusive Economic Zone.



Skipjack sliding to the water

The Vessel is named after Skipjack, *Katsuwonus pelamis*, a commercially important tuna fish of the Lakshadweep.



Dr. E. G. Silas, Director, CMFRI Speaking on the Occasion

Centre of Advanced Studies in Mariculture Established



Dr. M. V. Pylee, Vice-Chancellor delivering the inaugural address.

Inauguration of C A S.

A Centre for Advanced Studies in Mariculture was instituted at the Central Marine Fisheries Research Institute in June 1979. The Centre aims at promoting research and post-graduate education in mariculture to help enhancing fish production of the country and to meet the expertise requirements for accelerated development in the field. The Centre

of Advanced Studies is one of the sub-projects of the major project entitled Centre of Advanced Studies for Postgraduate Agricultural Education and Research operated by the ICAR in collaboration with FAO/UNDP/UNESCO.

The Centre was formally inaugurated on 29 October, 1980 by Dr. M. V. Pylee, Vice-

Chancellor of the University of Cochin.

Now the CAS has in its roles 4 Senior Research Fellows for Ph. D programme and 9 Junior Research Fellows for the M. Sc programme. The programme is conducted in collaboration with the University of Cochin which will also award the degrees.

Alfalfa and *P. Indicus*

Alfalfa in selective doses is found to induce higher growth rate in prawns (*P. indicus*). Triacotinol is the active ingredient in alfalfa. Preliminary experiments have been completed in the Fishery Environment Management Division of the Institute and detailed

quantitative studies are in progress.

Catfish Catch Causes Concern

Unbridled landings of 72 tonnes of catfish (*Tachysurus tenuispinis*) carrying eggs, in various stages, in their mouth

appeared in the purse-seines in Mangalore-Malpe region during September 1980. The eggs alone amounted to five tonnes. This undesirable catch causes concern in respect of conservation of the resources. Spawning stocks of white bites were also removed during the operation.



*Dr. K. Alagaraswami receives the award from
Shri Surjith Singh Barnala, Union Minister for Agriculture.*

Hari Om Ashram Trust Award to Dr. K. Alagaraswami

The ICAR Hari Om Ashram Trust Award for the year 1976 has been awarded to Dr. K. Alagaraswami, Senior Scientist of the Institute, in the field of Fisheries (pearl culture).

"Dr. Alagaraswami developed successfully the technique of Pearl Culture for the first time in India. Although the principles of pearl culture were already known, it has not been possible to apply these in field operations until appropriate techniques were developed by Dr. Alagaraswami. The contribution is particularly commendable in that this pioneering work has been based entirely on indigenous effort and know-how. In barely 43 days after the operation and implantation of the nucleus the first

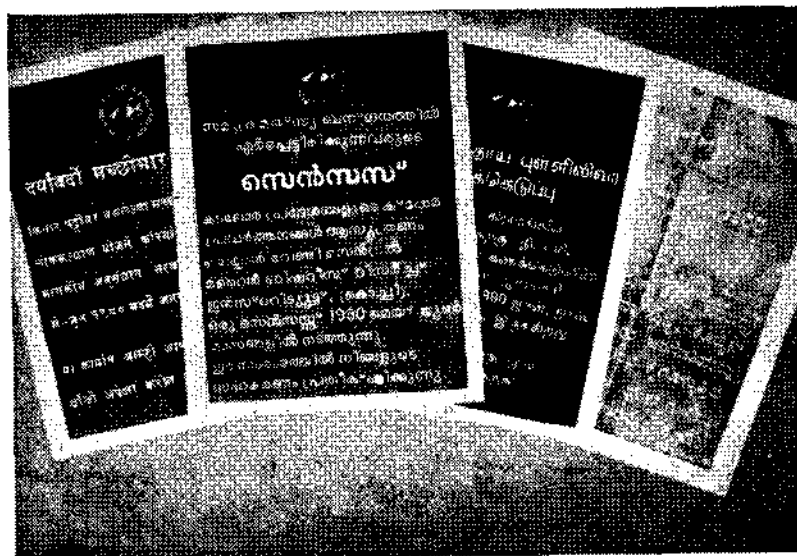
spherical and lustrous pearl was produced. Following this success, a pearl oyster farm has been established at Tuticorin (Tamil Nadu). The development of the technique of raft culture, multiple implantation of nuclei to enhance rate of pearl production, production of spherical shell beads from conch-shell waste for use as nuclei, production of special surgical tools required for the operation of pearl oysters and diversification of techniques for re-use of oysters in pearl production are some of the important contributions of Dr. Alagaraswami.

The contributions made by Dr. Alagaraswami and the training courses conducted by him in pearl culture techniques have laid the foundation for a pearl culture industry in India." Thus reads the citation of the award.

Monograph on Laccadive Fishes

A monograph entitled *Fishes of the Laccadive Archipelago* by S. Jones, former Director of CMFRI, and M. Kumaran, Scientist of the Institute was released on 25 September 1980 at Trivandrum. The book contains 760 pages with 619 illustrations and deals with 603 species so far known from the Lakshadweep. This publication will be an addition to the earlier monumental works by Francis Day, Weber and De Beaufort and J.L.B Smith on the fish fauna of the Indian Ocean. The book is published by the Nature Conservation and Aquatic Sources Service, Trivandrum.

Fishermen Census - A Mammoth Task Successfully Carried Out



Fishermen Census—wall posters in different languages.

The first 'All India Census on Marine Fishermen Population and Available Infrastructure Facilities' was completed by CMFRI during May-July, 1980. Marine fishermen in the country live in 2050 villages scattered along the 6100 km coastal line of the Bay of Bengal and the Arabian Sea. One-hundred and fifty CMFRI staff and 1400 outside helpers, trained at the Institute, worked round-the-clock travelling extensively collecting information on 152 items from each household, gathered from the population speaking different languages and having different cultures who often were skeptical about the very mission. State officials and local leaders were helpful in collecting the information.

Publicity

The fishing villages were informed sufficiently early about the proposed Census. Wall posters were printed in different

languages and were displayed at different centres at the villages. The hand-out explaining the objective of the survey on one side and a time-table card for school children on the other side was one of the attractive propaganda material. The news was floated in the All India Radio and the Doordarshan. The Doordarshan, Madras had featured an interview with Shri S. K. Dharma Raja, Scientist of the Institute.

The Mission

This All India Census aimed at collecting extensive information from each village on fishermen population, their educational and occupational status, number of crafts and gears and other infrastructure facilities available such as fishing harbours, ice plants, cold storages, freezing plants, canning facilities, boat building yards, transport facilities, etc. The data will be analysed and

made available to the fisheries departments of maritimer states and others interested for planning suitable development programmes.

The Hardy Staff

Some of the villages were so remote that one had to trek 10 km to reach the destination. Roads were bad and in one place wooden planks were to be brought to cross a small canal to reach the village. In some areas it was severe summer while in another region heavy monsoon. Food was a problem in certain places and certain villages did not have good drinking water even. In one village cholera was in epidemic form. Fighting with scorching sun and walking through muddy and slushy tracks the scientists and the technical staff of the Institute successfully carried out the huge survey, first of its kind in the country.



Institute staff in the field.



Fishermen of Vizhinjam coast.



Enumerators collecting Data.

SEMINARS/SYMPOSIA/WORKSHOPS/MEETINGS

EXPERT CONSULTATION ON FIELD IDENTIFICATION OF COMMERCIAL AQUATIC ORGANISMS met at CMFRI, Cochin under the FAO-Expert Consultation Programme from 21 January-15 February, 1980. The Experts completed the identification of economically important fishes of the Western Indian Ocean. They dealt with over 119 families of fish comprising more than 495 species collected from Indian coasts and from the coasts of Egypt, Aden, Kenya, Mozambique, and Mauritius. The bulk of the material for examination was provided by CMFRI.

A SUMMER INSTITUTE on the Culture of Edible Molluscs was organised at Tuticorin from 26 May - 24 June, 1980. Research workers, teachers and extension staff from different universities, research institutes and State departments participated. The participants were educated on the proven technologies developed by the Institute in the aquaculture of edible oysters, mussels and clams. Demonstration and field training was also given.

A WORKSHOP ON MUSSEL FARMING was held at Madras

in September 1980 under the auspices of the Centre of Advanced Studies in Mariculture to encounter and exchange information on the present status of research and development and to identify the gaps in knowledge and constraints encountered in propagating the technology in large scale. Forty six delegates

representing national and state fisheries organisations, agricultural universities, fisheries development corporations and research scholars participated. An action plan to facilitate the research and joint programmes for the accelerated development of the field in India was formulated in the Workshop.



Dr. E. G. Silas, Director, CMFRI, welcomes the participants.

Seen in the picture are (R to L) Shri. T. Tholasilingam (Officer in Charge, Madras Research Centre of CMFRI), Prof. (Dr.) P. N. Ganapathi (Emeritus Scientist, Andhra University), Dr. R. Raghu Prasad (Assistant Director-General, ICAR) and Shri. K. Nagappan Nair (officer in-charge, Tuticorin Research Centre of CMFRI).

National Seminar on Fisheries Extension

CMFRI jointly with the Central Inland Fisheries Research Institute, Central Institute of Fisheries Technology and Central Institute of Fisheries Education held a Seminar on Fisheries Extension from 8-10 December, 1980 at Cochin. About 100 delegates from State departments, union territories, agricultural universities and Central fisheries organisations and ICAR fisheries institutes participated in the Seminar and

35 Status papers were presented.

The Seminar strongly felt that the future development of fisheries, particularly in the rural sector, will largely depend on providing adequate set-up and facilities for fisheries extension in the States. The Seminar recommended that the Government at the Centre and States may evolve a public policy on fisheries extension and inte-

grate extension as a part of fisheries development programme with administrative support.

Participating organisation themselves are expected to implement the recommendations in policy with the administrative support from the Central and State governments.

An exhibition on focal theme 'Fisheries Extension' was organized and field trips were also arranged.

Scientists of CMFRI attended the Following Meetings

Workshop on Transfer of Technology

The first Workshop on Technology Transfer in Coastal Aquaculture, under the Lab-to-Land programme was organised by the Institute at Cochin and also at Mandapam Camp during 23-24 July, 1979. Scientists, farmers and development agencies participated in the workshop.

The ICAR Golden Jubilee Symposium & IFARD Global Convention on Agricultural Research and Education Systems for Development at New Delhi from September 3 - 7 1979. Dr E. G. Silas, Director, Dr K. Alagaraswami, Dr P. Vedavyasa Rao and Shri Tholasilingam, Senior Scientists participated.

The Symposium on Inland Aquaculture, at Barrackpore, from 12-14 February 1979. Calcutta, Dr P. Vedavyasa Rao and Dr P. V. Ramachandran Nair Senior Scientists participated.

Seminar on Problems of Fishermen (University of Cochin and State Resources Centre, KANFED, Trivandrum) from November 8-9, 1979 at Cochin Dr M. J. George & Dr. P. Vedavyasa Rao attended.

All India Workshop on Rural Orientation Training

Programme of Agricultural Research Scientist and ICAR Golden Jubilee Transfer of Technology programme at Hyderabad from 3-5 January 1979 Dr. P. Vedavyasa Rao, Sr. Scientist attended.

Seminar on Problem and Prospects of Mechanised Fishing in Kerala conducted by All Kerala Federation of Mechanised Fishing Boat Owner' Association at Cochin. February 29, 1980. Dr M. J. George, Sr. Scientist attended and presented a paper.

SYMPOSIUM ON COASTAL AQUACULTURE was held by the Marine Biological Association of India from 12-18 January 1980. Three-hundred and forty three scientists from all of the world including Scientists of CMFRI participated.

Dr S. V. Bapat, Joint Director to ICAR Scientific Panel in Fisheries Meeting in November, 1979, ICAR Director's Conference at Jodpur in December, 1979, meeting called by the Chief Minister of Kerala for discussing areas of operation of Mechanised and non-mechanised fishing craft at Trivandrum, April, 1979.

Dr P.S.B.R. James, Joint Director to the IDRC/CIFRI Workshop on Rural Fisheries held at Calcutta February 79, meeting of State Level Committee for Co-ordination work on Marine Fisheries in the State and Central Sector at Madras, August 1979; The Rameswaram Township Development Committee at Rameswaram, December 1979.

Shri K. Nagappan Nayar, Senior Scientist to 9th and 10th Meeting of the Sub-Committee under the Central Advisory Committee of Exploratory Fisheries Project, Tuticorin Base at Madras, January and May 1979.

Dr. P. V. Ramchandran Nair, Senior Scientist to Inter-disciplinary Task Force in the All India Co-ordinated Research Project for generation of additional income and Employment for landless Agricultural Labourers in the Country; member of the working group for the identification of micro-agroclimatic Zone for Kuttanad and

Central Co-ordinating authority for dealing with major spillages in the sea.

Dr. P. Vedavyasa Rao, Senior Scientist to Meeting called by the Chief Minister of Kerala for discussing areas of operation of mechanised fishing crafts at Trivandrum; Task Force on Inland and Estuarine Fisheries including culture programmes constituted by the Kerala State Planning Board to formulate proposals for the Development of Fresh and Brackish water Capture fisheries including Mariculture during the Sixth Plan.

Shri T. Tholasilingam, Senior Scientist to Consortium on All India Co-Ordinated project for the generation of additional income and employment for landless agricultural labourers at Coimbatore; State Level Committee of Co-ordination of work on Marine Fisheries at Madras; The meetings of the Central Advisory sub-Committee of the Exploratory Fishery Project, Madras Base, Meeting of the Scientific Advisory Committee at Goa.

Dr S. Ramamurthy, Senior Scientist to meeting of the Central Advisory Committee of the Bombay Exploratory Fishery Project; Meeting of the State Level Committee on the Co-ordination of Marine Fisheries Work in the State and Central

Section Bombay; Meeting of the Panel of Experts on Shrimp Processing, Bombay; Meeting to discuss Muraena Report, EFP, Bombay.

Shri M. H. Dhulkhed, Scientist and Dr M. Vasudev Pai, Shri G. G. Annigiri, Scientists, Shri K. Y. Telang, Junior Scientist to Rural Workers Education Camp, Karwar.

Shri S. J. Rajan, Project Officer, Operational Research Project, Kovalam Tamil Nadu Board of Rural Development; nominated to the Faculty of Madras University for giving lectures to Students in Post Graduate Diploma Course in Agriculture.

Dr K. Alagaraja, Scientist to Summer Institute on Recent Advances in Application of Sample Survey Methodology in Agriculture at IASRI, New Delhi.

Shri T. Jacob, Senior Scientist, Dr K. Alagarga, Shri S. K. Dharma Raja, Scientist, Shri Balan, Shri K. Narayanakurup and Shri M. Srinath, Junior Scientists to Annual Conference of Indian Society of Agricultural Statistics, Trichur.

Dr M. Vasudev Pai to meeting convened by the Commissioner for Commerce and Industry, Karnataka State at Bangalore for discussing problems conducted with the removal of limeshells from Kali river bed.

Indian Ocean declared sanctuary for whales

The International Whaling Commission has declared Indian Ocean (up to 55°S) as sanctuary for whales. This was decided at the Indian Ocean Alliance Meet held in April 1980. Dr. E. G. Silas, Director of CMFRI attended the Seminar and represented India for Indian Ocean Alliance.



International year of the Child - Programme at Mandapam Research Centre of CMFRI -- health education class in progress.

Dr E. G. Silas, Director attended following meetings

Indian Science Congress held at Hyderabad, 5 January, 1979.

ICAR Scientific Panel for Fisheries Research at ICAR headquarters, 17 and 18 January, 1979.

72nd Executive Committee Meeting of Kerala Agricultural University, 24 January, 1979.

ICAR Directors' Conference at Karnal, 28 February to 3 March 1979.

The Meeting of the Committee on Conservation of Shrimp and Other Resources in the Economic Zone at Delhi.

Second Meeting of the Management Committee of the Central Staff College at Hyderabad.

Meeting of the Sub-Com-

mittee for establishing a Fisheries College of the Kerala Agricultural University at Goa.

Workshop on Ocean Management at Bombay.

Eighteenth Meeting of the Marine Products Export Development Authority at Madras.

FAO Tuna Consultative Meeting at Manila, 25-30 June, 1979.

Achievement Audit Committee Meetings for Waltair and Kakinada Research Centres.

ICAR Golden Jubilee International Symposium and IFARD Global Convention at Delhi.

Pearl Culture Valedictory function at Tuticorin.

Chaired the Meeting on Conservation of Shrimp and other resources of the Exclusive Economic Zone at Trivandrum.

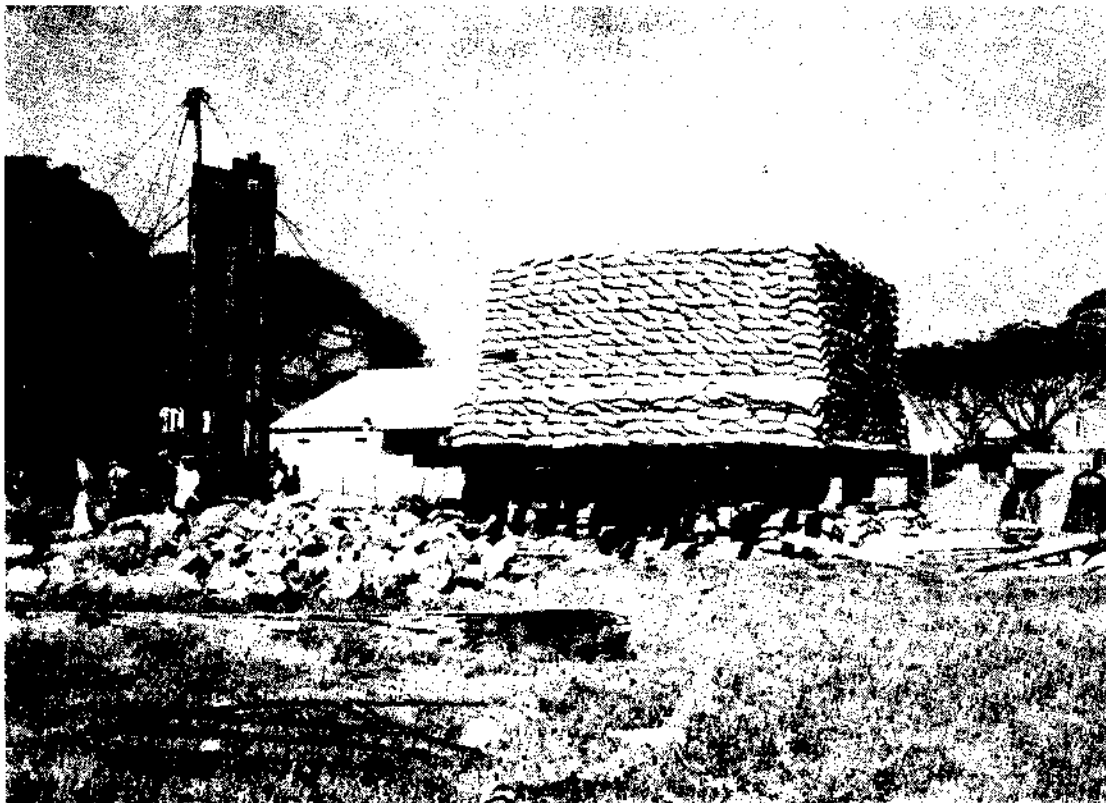
CMFRI acquires land for demonstration farm

Five hundred acres of land and brackishwater area at Mandapam Camp has been acquired by the Institute from the Government of Tamil Nadu for developing low-cost technology in pond construction and fish and prawn culture demonstration making use of derelict water and land areas along the coast for fish production.

Another 90.45 acres of land has been acquired at Muttucad Village, Chingleput district to put up International Centre for Mariculture. At Karwar 3.3 acres of forest area has been acquired for construction of laboratory and administration buildings and in Veraval 8 plots of 2868sq ft have been acquired for construction of residential quarters.



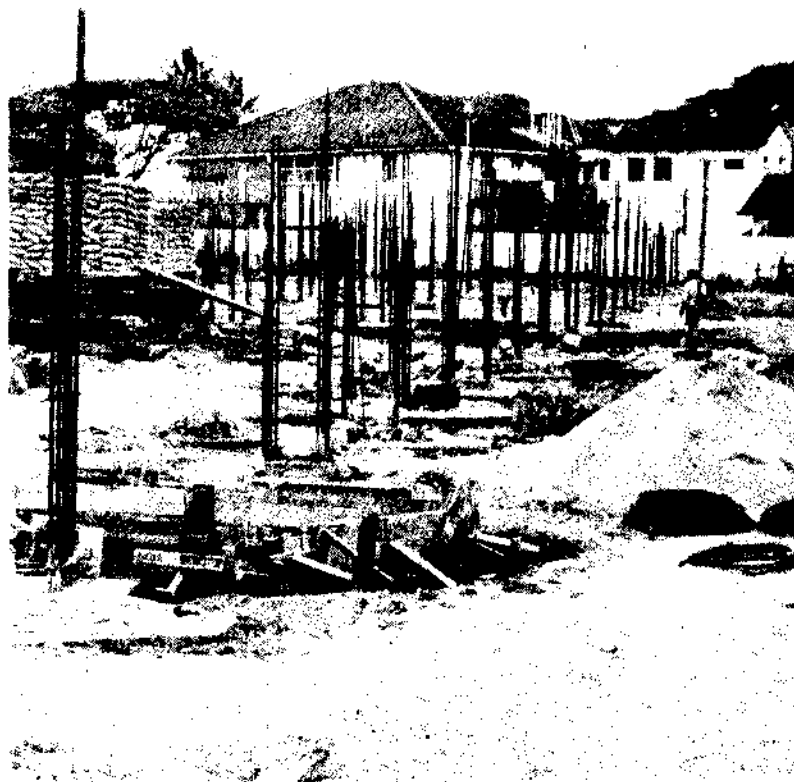
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Work in
Progress



VISITORS

Dr. M. S. Swaminathan, Director-General, ICAR visited CMFRI before laying down his office at the ICAR to join the Ministry of Agriculture and Irrigation as Principal Secretary.

H.E. Mr. France Albert Rene, President of the Republic of Seychelles visited CMFRI on 8 May, 1980. He was accompanied by Mrs. Rene and 19 others. The president was shown some of the activities of CMFRI.

Dr. O. P. Gautam, Director-General, ICAR visited CMFRI, on 20 August, 1980. This was his first visit after taking up the office of the Director-General. The Director-General visited the Narakkal Prawn Culture Laboratory and the Lab-to-Land programme at Valappu.

Hon'ble Members of Parliament on study tour were at CMFRI from 30 August to 2 September, 1980. They visited the Krishi Vigyan Kendra, Operational Research Project, Narakkal Prawn Culture Laboratory and Lab-to-Land Programmes.

Shri R. V. Swaminathan, Hon'ble Minister of State for Agriculture visited Tuticorin Research Centre of CMFRI, Tuticorin on 26 October, 1980. The Minister was shown different activities of the Institute.



H. E. President Rene at CMFRI with Shri Philipose Thomas (District Collector, Ernakulam) and Dr E. G. Silas (Director, CMFRI). Shri K. H. Mohamed, Senior Scientist explains the prawn culture technique.



Dr O. P. Gautam, addressing the staff of CMFRI.

The following persons also visited CMFRI Headquarters and its Regional/Research Centres

Mr C. E. Roper and Michael J. Sweeny, Smithsonian Institute, Washington.

Shri Sujan Singh, Member of Parliament and Member, Governing Body of ICAR, New Delhi.

Mr Keith Harry Haywood, Principal Operative Research Officer, Whitefish Authority, U. K.

Mr William Brugge, White fish Authority, Hull, U. K.

Mr Kai Chow, ADCP, FAO, Rome.

Dr M. W. R. M De Silva, School of Biological Sciences, Univ. Sains, Malaysia.

Dr Walter Fischer, Fisheries Resources Officer, FAO, Rome.

Dr Ullrich H. Kiermayr and Dr. M. H. Gunawardane, World Bank, Washington.

Dr J. A. Gulland, Dept of Fisheries, FAO, Rome.

Dr B. B. Naghich, CPRI, Simla.

Dr. M. L. Shahare, Chairman, ASRB. ICAR.

Mr. Hubert Mendis, Managing Director, Fisheries Development Corporation, Colombo.

Shri N. Kaleeswaran, Vice Chancellor, Kerala Agricultural University, Mannuthy.

Shri U. Vaidyanathan, Jr Secretary and Financial Advi-

ser, Department of Agriculture New Delhi.

Mr. Chadwick, Commonwealth Foundation. London, U. K.

Mr. H. R. English, Principal System Engineer. White Fish Authority, Hull, England.

Dr C. M. Singh, Director, IVRI, Izatnagar, U.P

Shri T. Narayanan, Director (AH), Planning Commission, New Delhi.

Mr Mitford John. Guyana Food Processors, Guyana. South America (IDRC)

Mr. Felix Bollmann. Artov Tourism Development. Geneva, Switzerland.

Dr Brian Moss. School of Environmental Sciences University of East Anglia Great Britain.

Shri Kartar Singh, Science officer, British Council Division, 737, Anna Salai Madras.

Mr. Mariyageacac Moucin, Student. Vie. R. De Novellis' Chieti, Italy.

Mr. Sr. Christianse Moarnd, Provincial of France, Annecy, France.

Mr and Mrs David Ware, Sheffield 1, England.

Shri S. S. Dhanoa. Secretary, ICAR New Delhi.

Prof P. N. Ganapathi, Department of Zoology, Andhra University Waltair.

Dr Narman F. Lewis, Head, Fish & Meat Technology Section, Biochemistry & Food Technology Division BARC, Bombay.

Shri P. F. Rodrigues, Minister for Fisheries, Government of Karnataka.



Honourable Minister Shri R. V. Swaminathan at Tuticorin Research Centre.

Shri M. Jayaraj, Director of Fisheries, Government of Karnataka.

Miss Ranjani Ramachandran, IAS Probationer, Deputy Commissioner's Office, Karwar.

Shri Kamaleswar singh, Yogendra Sarma, G. H. Bhagat, Shri Nathuram Mirdha, [Members of Parliament] and K. K. Grover, Under Secretary, Official Language Committee.

Shri Balakrishnan, District Collector, Calicut.

Dr T. R. Dutta, Director, CARI Port Blair.

Dr R. Gopalakrishnan, Head, Education & Extn, Centre for Water Resources Development.

Hon'ble Justice S. Ranganathan, Chairman, Monopolies and Restrictive Trade Practices Commission, New Delhi.

Mr. Yoshinoby Arra, Tokyo, Japan.

Mr. Aloy W. Fernando, Ministry of Fisheries, Colombo, Sri Lanka.

Mr. Oybin and Ulbrandsen, Naval Architects, Norway.

Mr. G. Pofor, Fishery Technologist, FAO.

Shri Ahmed Shareef, Minister for Fisheries, Govt. of Andhra Pradesh.

Mr. W. T. Brugge, Fishery Expert, White Fish Authority, U. K.

Mr. P. Tiffeney, Marketing Development Officer, U. K.

Shri S. Banerjee, AIS, Director of Fisheries, Andhra Pradesh.

Shri M. Chidambaram, Member, Achievement Audit Committee, Madras.

Dr E. L. Borcopgan, SEAFDEC, Philippines.

Dr R. Raghu Prasad, Assistant Director-General [Fisheries] ICAR, New Delhi.

Dr B. K. Soni, Deputy Director - General, ICAR.

Dr A. K. Ganguly, National Fellow, BARC, Bombay.

Shri P. V. Hariharasankaran,

Director [personnel], ICAR, New Delhi.

Shri R. C. Choudhuri, Chairman, MPEDA, Cochin.

Mr. John G. Bene and Mrs Nerina Benne, 6 Crescent Road, Ottawa, Canada.

Shri Thomas Abraham, High Commissioner of India, Colombo.

Shri N. R. Jayal, Joint Secretary, Ministry of Agriculture & Irrigation, New Delhi.

Mr L. A. Bedford, Chief Information Officer, U. S. Federal Wildlife service.



Mr. Mohamed Kassim Baluch, Hon'ble Minister for Fisheries and Law, Govt. of Gujarat during his visit to Narakkal prawn culture Laboratory of CMFRI.

SPORTS

ICAR Golden Jubilee Sports Athletics Championship to Shri V. Atchutha Rao

Shri V. Atchutha Rao, our Ace Sprinter, bagged the prestigious Individual Championship for athletics at the ICAR Golden Jubilee Sports, 1979 held at Hyderabad. He won the 200m and 400m race and stood second in 100m race. Shri Atchutha Rao is attached to our Waltair Research Centre.

CMFRI had fielded four athletes for the Golden Jubilee Inter Zonal Sports. Shri Padma-sekhara of our Mangalore Research Centre and Shri M. K. Gopalakrishnan of the Pelagic Fishery Laboratory won the the second places for high jump and hammer throw respectively.

ICAR ANNUAL SPORTS 1980, ZONAL MEET

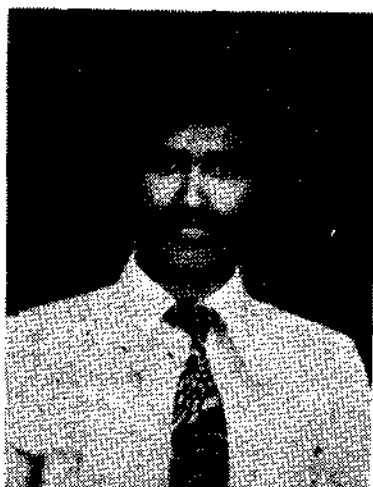
39 sportsmen and athletes represented CMFRI at the ICAR Zonal Sports Meet held at Sugarcane Breeding Institute, Coimbatore in November, 1980. Our Institute was placed fourth on the basis of the overall performance.



*Shri Atchutha Rao,
Individual Champion
for Athletics.*



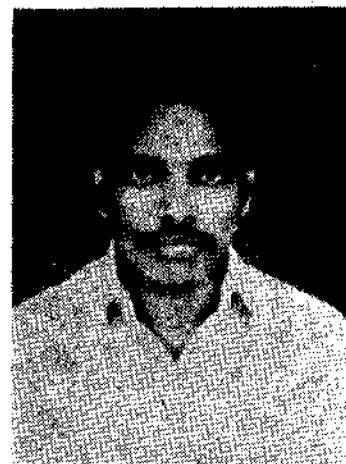
ICAR Annual Sports, 200m race.



Shri Padmasekhara



Shri T. S. Velayudhan



Shri Gopalakrishnan

ICAR ANNUAL SPORTS 1980

ON THE VICTORY STAND

Event	Name	Position
100 m race	Shri V. Atchutha Rao	First
200 m race	Shri V. Atchutha Rao	First
400 m race	Shri V. Atchutha Rao	First
800 m race	Shri T. S. Velayudhan (Tuticorin)	First
5km Cycle race	Shri Lohitha K. Suvarna (Karwar Research Centre)	Second
Triple jump	Shri T. Mohamed Iqbal (Calicut Research Centre)	Third
Hammer throw	Shri M. K. Gopalakrishnan (Cochin)	First
4x 100 m relay	CMFRI	First
Kabaddi	CMFRI	Runners up
Shuttle Badminton	CMFRI	Runners up
Shuttle Badminton (Individual)	Shri A Raghunathan (Cochin)	Runner up

STAFF NEWS

Deputations

Shri M. S. Muthu, Scientist, and Shri Neelakanta Pillai, Junior Scientist to Philippines for 12 weeks training in breeding, re-maturation and hatchery management under the ICAR-SAEF-DEC Collaborative Research Work Plan, 1978 - 79 at the Asian Institute of Aquaculture, 23 November, 1978.

Shri S. Mahadevan, Scientist to West Java to attend the Symposium on Fish Diseases, 28 November to 1 December 1978.

Shri C. P. Gopinathan, Junior Scientist and Dr. C. M. James, Scientist to Philippines for 8 weeks training in mass culture of fish food organisms under the ICAR - SEAFDEC Collaborative Research Work Plan, 1978-79 at the Asian Institute of Aquaculture, 26 February, 1979.

Shri R. Marichamy, Scientist to Philippines to attend the Workshop on Pen and Cage Culture of Fishes, 12 to 22 February, 1979.

Shri V. Mohan Raj and Shri V. Gandhi Junior Scientists to Philippines for 6 weeks training in breeding and culture of milkfish under ICAR - SEAFDEC Collaborative Research Work Plan at the Department of Aquaculture, SEAFDEC Manila, 15 March, 1979.

Dr. E. G. Silas, Director to Australia and Singapore to attend the Seminar and Workshop on 'Dugong Conservation in Australia/New Guinea waters held at Perth. He also visited the National Research Laboratories in Australia and Singapore, 7 to 20 May, 1979.

Shri C. P. Ramamirtham, Scientist to Philippines to participate in the Seventh FAO-SIDA Workshop on Aquatic Pollution in relation to Protection of Living Resources held at Manila, 7 May to 9 June, 1979.

Dr. E. G. Silas, Director to Philippines and Bangkok to attend the FAO Tuna Consultative Meeting at Manila, 23 June to 3 July, 1979.

Shri G. Subba Raju, Scientist to Rome, to attend the United Nations Fourth International Training Course on Application of Remote Sensing to Fisheries organised under the auspices of UN-FAO, 19 August to 3 November, 1979.

Shri V. N. Bande, Scientist to Norway and Peru for training in Acoustic Techniques applied to fish stock assessment organised by UNDP/FAO, 19 August to 3 November 1979.

Dr. E. G. Silas, Director to Japan, Hawaii, U. S. A., U. K.

and Rome, to visit marine fisheries laboratories for identifying expert consultancy and developing exchange programmes in connection with the UNDP/ICAR Centre for Advanced Studies in Mariculture at CMFRI for locating laboratories where staff of CAS could have short-term training and for finding out type of equipments that would be required for the Programme. He also attended the World Meeting on Sea Turtle Conservation Held at Washington, 24 October to 24 December 1979.

Dr. E. G. Silas, Director to Seychelles as an expert member on Indian delegation for discussing technical aspects with DANIDA and Danish shipyards regarding design and construction of a fishery and oceanographic research vessel for the Department of Science and Technology, April, 1980.

Dr. E. G. Silas Director to attend the Seminar on 'Conservation in the Indian Ocean and to represent India at Indian Ocean Alliance.

Shri K. V. Narayana Rao, Senior Scientist to FAO/IOF Committee on Management of Indian Ocean Tunas on the IPFC special Committee on Management of Indo-Pacific tunas and the 6th session of the Indian Ocean fisheries Commission

Appointments

Shri O. Thippeswamy as Field Assistant (T-1) at Mangalore, 8 January 1979.

Shri H. S. Shivanna as Field Assistant (T-1) at Karwar, 8 January, 1979.

Shri S. Kandaswamy, Technical Assistant (T-II-3) as Technical Officer (T-6) on deputation in CMFRI - MPEDA Project on Elver Resources Survey & Eel Culture, Madras, 4 January, 1979.

Shri A. Deivendra Gandhi, Jr. Technical Assistant (T-2) as Project Assistant (T-II-3) on deputation in CMFRI-MPEDA Project on Elver Resources Sur-

vey and Eel Culture, Mandapam Camp, 8 January, 1979.

Shri M. R. Arputharaj, Jr. Technical Assistant (T-2) as Project Assistant (T-II-3) on deputation in CMFRI - MPEDA Project on Elver Resources Survey and Eel Culture, Mandapam Camp, 8 January, 1979.

Shri N. Varatharajan, Field Assistant (T-1) as Project Assistant (T-II-3) on deputation in CMFRI-MPEDA project on Elver Resources Survey and Eel Culture, Madras, 9 January, 1979.

Shri Kemparaju as Field Assistant (T-1) at Karwar, 15 January, 1979

Shri P. C. Joseph as Jun-

ior Clerk at Cochin, 17 January, 1979.

Shri M. Balaraman as Junior Clerk under Project on Assessment of Fry Resources and Cultivable Penaeid Prawns at Cochin, 10 January, 1979.

Shri N. Ashok Kumar as Supporting Staff Grade I (Watchman) at Madras 15 January, 1979.

Shri M. Haroon Rasheed as Supporting Staff Grade I (Watchman) at Madras. 16 January 1979.

Shri K. P. Chandrasenan, Junior Clerk as Senior Clerk on *ad hoc* basis at Cochin, 3 January, 1979.

Shri A. Kajendran, Senior Clerk as Assistant on deputation under Elver Resources Survey and Eel Culture at Mandapam Camp. 10 January, 1979.

Shri K. M. Karupiah, Senior Clerk as Assistant on deputation under Project on Assessment of Fry Resources and Cultivable Penaeid Prawns at Cochin, 10 January, 1979.

Shri M. Ramu, Supporting Staff Grade I (Watchman) as S S Grade III (Fieldman) on deputation under Elver Resources Survey and Eel Culture at Madras, 9 January 1979.

Shri M. Ibrahimsa, Supporting Staff Grade III (Lab Attendant) as supporting Staff Grade III (Fieldman) on deputation under Elver Resources Survey and Eel Culture at Mandapam Camp. 1 January, 1979.

Shri K. Ramakurup, Motor Driver on deputation with the Project on Fry Resources Survey and Cultivable Penaeid Prawns, CMFRI, Cochin as Motor Driver (T-1) in the KVK Narakkal, 30 August, 1979.

Deputations Continued

held at Perth, Australia, 20-29 February, 1980.

Shri S. Mahadevan, Scientist to Washington, U. S. A to attend the World Meeting on Sea Turtle Conservation, 28 November, 1979 to 1 December 1979.

Dr. M. J. George, Senior Scientist and Dr. K. C. George, Scientist to attend the Consultation on Stock Assessment on Small-Scale Fisheries, Bay of Bengal Programme of FAO of the United Nations at Chittagong, 16 to 21 June 1980.

Dr. E. G. Silas, Director, and Shri K. H. Mohamed to Seychelles at the special invitation of the President of the Seychelles to assess the feasibility of taking up mariculture in the Islands and to give suggestions in this aspect,

Smt. B. Prasannakumary, Scientist S to IASRI, New Delhi for one year Professional Statistician's Certificate Course, 1 October, 1979.

Shri K. Kanakasabapathy, Sr. Library-Cum-Documnation Assistant (T-4) to attend 3 weeks training on Swift-150 Offset Printing Machine, 1 May, 1980 and to attend training course on Information storage and retrieval system at the SIET Institute Hyderabad, 5 to 30 January. 1981.

Shri L. R. Khambadkar, Field Assistant (T-1) to attend training in Swifts Private Ltd, Maratha, Udyog Bhavan.

Shri S. Jayachandran and Shri K. P. Chandrasenan, Senior Clerks to attend five days training in the operation of Bradma Embossing Machine at Bradma India Ltd, Coimbatore, 5 May, 1980.

Shri R. G. Kavitkar as Field Assistant (T-1) at Bombay, 29 September, 1979.

Yhri K. K. Sankaran as Artist (T-1) at Cochin, 6 October, 1979.

Miss. M. R. Beena as Punch Card Operator (T-1) at Cochin, 17 October, 1979.

Shri K. P. George as Punch Card Operator (T-1) at Cochin, 17 October, 1979.

Shri M. B. Seynudeen as Punch Card Operator (T-1) at Cochin, 18 October, 1979.

Shri R. Ankam Vijay Kumar as Field Assistant (T-1) at Bombay, 3 October, 1979.

Shri Uday B. Pawar as Field Assistant (T-1) at Bombay, 3 October, 1979.

Shri Barsingh Suresh Jayasingh as Field Assistant (T-1) at Bombay, 11 October, 1979.

Shri S. Sreenivasan as Punch Card Operator (T-1) at Cochin, 22 October, 1979.

Miss P. T. Mani as Punch Card Operator (T-1) at Cochin, 23 October, 1979.

Shri P. P. Pavithran as Punch Card Operator (T-1) at Cochin, 23 October, 1979.

Shri S. Natarajan as Field Officer (T-6) at Cochin, 31 October, 1979.

Shri G. P. Edwin Daniel as Technical Assistant (T-11-3) on *ad hoc* basis at Cochin, 31 October, 1979.

Smt. Geetha Antony as Technical Assistant (T-11-3) on *ad hoc* basis at Cochin, 31 October, 1979.

Shri A. Nandakumar as Field Assistant (T-1) at Cochin, 31 October, 1979.

Shri K. V. Raghavan as Field Assistant (T-1) at Cochin, 31 October, 1979.

Shri M. Abdul Nizar as Field Assistant (T-1) at Cochin, 31 October 1979.

Shri K. Narayanan Nair as Motor Driver (T-1) at Cochin, 31 October, 1979.

Shri M. N. Appukuttan as Motor Driver (T-1) at Cochin, 31 October, 1979.

Shri G. Saivadurai, Supporting Staff Grade I (Watchman) as Supporting Staff Grade III (Fieldman) on deputation under Elver Resources Survey and Eel Culture at Mandapam Camp, 1 January, 1979.

Shri P. Karupppiah, Supporting Staff Grade I (Watchman) as supporting Staff Grade III (Fieldman) on deputation under Elver Resources Survey and Eel Culture at Mandapam Camp, 1 January, 1979.

Shri K. Dorairaj, Scientist S-1 as Project Officer Mandapam Camp on deputation the Project on Elver Resources Survey and Eel Culture.

Shri P. Karunakaran Nair, Senior Technical Assistant (T-4) as Senior Training Assistant (T-6) at Krishi Vigyan Kendra, Narakkal; 5 February 1979.

Shri K. Asokakumaran Unnithan, Training Assistant (T-4) as Senior Training Assistant (T-6) at K. V. K, Narakkal, 5 February, 1979.

Shri K. V. George, Senior Technical Assistant (T-4) as Senior Training Assistant (T-6) at K. V. K, Narakkal, 20 February, 1979.

Shri S. Appa Rao, S. S. Grade I as Jr Clerk at Cochin, 20 February, 1979.

Dr. K. Radhakrishna, Sci-S-2, at Waltair on reversion from National Institute of Oceanography, 11 April, 1979.

Shri G. P. Kumarasamy Achary, Scientist S-1 at Cochin on reversion from Directorate of Fisheries, Kerala, 9 April, 1979.

Shri P. T. Meeakshisundaram as Scientist S-2 on merit promotion on the basis of 5 yearly assessment, 1 January, 1979.

Shri P. Bensam, Scientist S-2 at Mandapam Camp on reversion from deputation to Annamali University, 2 July, 1979.

Shri D. Gangadhara Gowda as S. S. Grade I (Watchman) at Mangalore, 9 March, 1979.

Shri V. V. Lakshmyanarayanan Senior Clerk on regular basis at Cochin, 10 March, 1979

Miss C. Kamalakshi as Senior Clerk on regular basis, 10 March, 1979

Shri C. Koragu Naik Assistant on regular basis, 10 March, 1979.

Shri A. Keshava as S. S. Grade I (Watchman) at Mangalore, 13 March, 1979.

Shri A. Muniandi as S. S. Grade IV (L A) at Madras, 23 March, 1979.

Shri K. Sadanandan, S. S. Grade I (Watchman) as Junior Clerk at Cochin, 30 March, 1979.

Miss M. A. Seetha, Junior Stenographer as Stenographer, 10 March, 1979.

With effect from 13 July, 1978

Miss U. Sujithakumari as Junior Clerk at Mangalore, 16 March, 1979.

Shri P. Thomas, S. S. Grade III (L. A) as S. S. Grade IV (L.A).

Shri G. Karunakaran, S. S. Grade III (LA) as S. S. Grade IV (LA.)

Shri K. Sankaran, S.S. Grade III (LA) as S. S. Grade IV (LA)

Shri K. P. Raghavan, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri T. Madhavan, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri K. K. Narayanan, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri P. K. Haridas, S. S. Grade III (L A) S. S. Grade IV (LA)

Shri P. Viswanathan, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri Mohamed Moideen, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri S. B. Harikantar, S. S. Grade III (Fieldman) as S. S. Grade IV Fieldman.

Shri K. G. Damodaran, S.S. Grade III (LA) as S. S Grade IV (LA)

Shri K. Raman, S. S. Grade III (LA) as S. S. Grade IV (LA)

Shri A. Ramakurup. S. S. Grade III (LA) as S. S. Grade IV (LA)

Shri K. Parameswaran Nair S. S. Grade III (LA) as S. S. Grade IV (LA).

Shri N. M. Naik, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri B. T. Talpade, S. S. Grade III (LA) as S. S. Grade IV (LA)

Shri D. Kojan Koya, S. S. Grade III (Fieldman) as S. S. Grade IV (Fieldman)

Shri K. Karuvan, S. S Grade I (Safaiwala) as S. S Grade II (Safaiwala)

Shri V. Santhanam, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri K. Muthiah, S.S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri R. Sevugan S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri M. Muthu, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri R. Soni, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri V. Ponnusamy, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri A. Ayyappadas, S. S. Grade I (Peon) as S. S. Grade II (Peon)

Shri K. Chandran, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri K. G. Krishnankutty Nair, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri A. Mari,* S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri R. Alagan, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri M. Ramu, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri P. Karupian, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri P. Mahalingam, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri M. Vellayan, S.S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri A. P. Sebastian, S. S. Grade I (Peon) as S. S. Grade II (Peon)

Shri V. C. Antony, S. S. Grade I (Peon) as S. S. Grade II (Peon)

Shri K. Munisamy, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri S. Mani, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri Vali Mohamed, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri G. Saivadurai S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri K. Gurusamy, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri M. Govindaraj, S. S. Grade I (Watchman) as S. S. Grade II (Watchman)

Shri K. Pandi, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala)

Shri T. A. Vijayan, S. S. Grade I (Peon) as Grade II (Peon)

Shri V. Samayamuthu as S. S. Grade I (Watchman) under CMFRI- MPEDA Scheme on Elver Resources Surevy and Eel Culture at Mandapam Camp.

Shri K. Velayudhan as S. S. Grade I (Watchman) under CMFRI-MPEDA Scheme on Elver Resources Survey and Eel Culture at Mandapam Camp.

Miss Piad Martha D' Souza Jr Clerk as Senior Sr. Clerk at Mangalore, 11 April, 1979.

Shri S. Muthumari, S. S. Grade I (Lascar) as Jr. Clerk at Vizhinjam. 3 April, 1979.

Shri M. Rengan, S. S. Grade III (L A) as S. S. Grade II (Fieldman) on deputation under the CMFRI-MPEDA Scheme on Elver Resources Survey and Eel Culture at Mandapam Camp. 15 May, 1979.

Shri A. Alagarsamy, S. S. Grade III (L A) as S.S. Grade III

(Watchman) on deputation under the CMFRI - MPEDA Scheme on Elver Resources and Eel Culture at Mandapam Camp, 14 June, 1979.

Miss E. Sasikala as Hindi Typist at Cochin 14 June, 1979.

Shri S. K. Gurusamy as S.S. Gradel (Watchman) at Tuticorin, 7 June, 1979.

Shri P. Sudhakar as Field Assistant (T-1) at Waltair, 24 August, 1979

Shri K. K. Soman, as Motor Driver (T-1) in the CMFRI-MPEDA Project on Fry Resources Survey of Cultivable Penaeid Prawns, CMFRI, Cochin, 30 August, 1979.

Shri B. Chinna Appa Rao as Field Assistant (T-1) at Waltair. 2 March, 1979

Shri T. Mohammed Iqbal as Field Assistant (T-1) at Kozhikode, 28 February, 1979

Shri K. Ramakurup as Motor Driver (T-1) on deputation to CMFRI-MPEDA Project on Fry Resources Survey of Cultivable Penaeid Prawns at Cochin, 23 March, 1979

Shri K. A. M. Koya as Motor Driver (T-1) at Vizhinjam on transfer from Central Agricultural Research Institute, Port Blair, 12 March, 1979

Shri V. K. Ravindranathan as Motor Driver (T-1) under the CMFRI-MPEDA Project on Fry Resources Survey of Cultivable Penaeid Prawns at Mangalore, 2 April, 1979

Shri Lahu Rambhan Khambadkar as Field Assistant (T-1) at Cochin, 16 April, 1979

Shri V. S. Gopal as Field Assistant (T-1) at Cochin 17 April, 1979

Shri R. Balachandran Nair as Motor Driver (T-1) under

the CMFRI MPEDA Project on Fry Resources Survey of Cultivable Penaeid Prawns at Calicut, 24 March, 1979

Shri Arun Yashawant Mestry as Field Assistant (T-1) at Bombay, 23 April, 1979

Shri Vishnu Govind Patil as Field Assistant (T-1) at Bombay, 17 April, 1979

Shri Xavier Mohandas as Motor Driver (T-1) on deputation to CMFRI-MPEDA Project on Fry Resources of Cultivable Penaeid Prawns at Karwar, 18 April, 1979

Shri K. Chacko as Projector Operator (T-1) at Cochin, 1 May, 1979

Shri P. D. Johnson as Foreman (T-II-3) at Mandapam Camp, 4 May, 1979

Miss A. Rajeswari Menon as Hindi Translator (T-4) at Cochin, 14 June, 1979

Shri T. P. Haridasan as Carpenter (T-1) at Mandapam Camp, 2 June, 1979

Shri Samuel Sumithrudu as Field Assistant (T-1) at Bombay, 29 June, 1979

Shri Sudhakar K. Sonar as Field Assistant (T-1) at Bombay, 18 July, 1979.

Shri K. U. Gopi as S. S. Gradel (Safaiwala) at Cochin, 2 March, 1979.

Shri G. Sivalingam as S. S. Grade I (Safaiwala) at Cochin, 5 March, 1979.

Miss K. M. Annamma as Junior Clerk at Cochin, 7 March, 1979.

Shri M. J. Chandy as S. S. Grade I (Watchman) at Calicut, 5 March, 1979.

Shri K. J. Mathew Motor Driver (T-1) at Cochin, 20 November, 1979.

Shri K. D. Mathai as Motor Driver (T-1) at Cochin, 20 November, 1979

Shri S. Ramachandran Nair as Motor Driver (T-1) at Vizhinjam, 17 November, 1979.

Shri H. S. Mahadevaswamy as Field Assistant (T-1) at Mangalore, 1 December, 1979.

Shri Thakur Rajendra as Field Assistant (T-1) at Mangalore, 11 December, 1979.

Shri M. G. Sivadasan as Field Assistant (T-1) at Narakkal, 18 December, 1979.

Shri T. E. George Augustine as Bosun (T-11-3) at Cochin, 22 December, 1979.

Shri. Mangesh B. Kotharkar as S. S. Grade I (Watchman) at Karwar, 4 August, 1979.

Shri P. J. Theresia, S. S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala) at Cochin, 8 August, 1979.

Shri M. Raman, S.S. Grade I (Safaiwala) as S. S. Grade II (Safaiwala) at Mandapam Camp, 13 July, 1979.

Shri D. M. Victor Ganaraj, Senior Clerk as Assistant at Cochin, 10 September, 1979.

Smt. M. O. Leela, Senior Clerk on *ad hoc* basis as Senior Clerk on regular basis at Cochin, 10 September, 1979.

Shri K. Velayudhan as S. S. Grade I (Safaiwala) at Cochin, 17 September, 1979

Shri N. Thankappan Kani as S. S. Grade I (Safaiwala) at Cochin, 19 September, 1979.

Shri. A. Sivadasan as S. S. Grade I (Watchman) at Calicut, 18 September, 1979.

Shri C. G. Thomas as Junior Stenographer Centre of Advanced Studies Cochin, 10 September, 1979.

Shri C. N. Chandrasekharan as Junior Stenographer at Centre of Advanced Studies at Cochin, 10 September, 1979.

Shri. G. Chakrapani as S. S. Grade I (Watchman) at Operational Research Project at Kovalam, 1 September, 1979.

Smt. P. V. Shanbhag, Junior Clerk as Senior Clerk on *ad hoc* basis at Bombay, 24 October, 1979.

Shri S. Antony George Ratnam, Junior Clerk as Senior Clerk on *ad hoc* basis at Cochin, 24 October, 1979.

Smt P. V. Mary, Junior Clerk as Senior Clerk on *ad hoc* basis at Cochin, 24 October, 1979.

Shri K. L. K. Padmanabhan, Senior Clerk as Assistant on *ad hoc* basis at Cochin, 24 October, 1979.

Shri M. Ramakrishnan, Senior Clerk as Assistant on regular basis at Cochin, 2 November, 1979.

Shri M. C. Thampi as S. S. Grade I (Safaiwala) at Krishi Vigyan Kendra at Narakkal 7 November, 1979.

Shri V. Vairam as Senior Clerk at Cochin, 31 October, 1979.

Smt. N. Yesoda as Junior Stenographer at Cochin, 31 October, 1979.

Smt. K. J. Malathy Devi as Junior Stenographer at Cochin, 31 October, 1979.

Smt. A. Ranjini as Junior Clerk at Cochin, 31 October, 1979.

Smt. I. M. Baby Rajalakshmy as Junior Clerk at Cochin, 31 October, 1979.

Shri C. K. Vyasan as S. S. Grade I (Watchman) at Cochin, 31 October, 1979.

Shri M. K. Purushothaman as S. S. Grade I (Peon) at Cochin, 31 October, 1979.

Shri N. T. Velappan as S. S. Grade I (Peon) at Cochin, 31 October, 1979.

Shri M. Sivasankaran, Junior Clerk as Senior Clerk on *ad hoc* basis at Mangalore 3 December, 1979.

The following Scientists have been promoted by the Council with effect from 1 July, 1976

Scientist S

Shri K. G. Girijavallabhan
" K. Devarajan
" T. M. Yohannan
" A. Regunathan
" K. K. Sukumaran
" P. Nammalwar
" A. A. Jayaprakash
" K. Ramdoss
" V. Thankaraj Subramaniam
" N. Gopinatha Menon
" Pon Siraimethan
" N. Kaliaperumal

Scientist S-1

Shri K. S. Sundaram
" K. V. Somasekaran Nair
" A. Charles Christian Victor
" P. Livingston
" S. Shanmugham
" K. Prabhakaran
" G. Nandakumar
" R. Soundararajan
" C. Muthiah
Dr P. S. Kuriakose
Shri P. N. Radhakrishnan Nair
" K. Balan

Scientist S-1 to Scientist S-2

Dr M. Vasudev Pai
Dr V. Balakrishnan
Shri V. Balan
Dr K. Satyanarayana Rao
Shri K. A. Narasimham
Shri M. Kumaran
Shri V. N. Bande (1-7-77)

Scientist S-2 to S-3 (1 July 1977)

Shri T. Tholasilingam,
Shri K. Venkatanarayana Rao,
Shri D. Chakraborty
Dr M. J. George (1 July 1976)

The following Scientists have been granted advance increment with effect from 1 July, 1976

Scientist S'

Shri I. David Raj - Three,
Shri X M E Rajapndian-Two
Smt. V Chandrika - Two
Shri C V Mathew-Two
Shri M. Aravindakshan - One
Smt. T S Naomi - One
Smt. B Prasannakumary-One
Smt K Vijayalakshmi - One

Scientist S-1 (1 July, 1977)

Dr P. Vijayaraghavan-Two
Shri K. N. Krishna kartha-Two
Dr M. M. Thomas, Scientist S-1 as Scientist S-2 at Cochin, 16 January, 1980.

Dr P. S. Kuriakose, Scientist S-1 as Scientist S-2 at Calicut, 16 January, 1980.

Smt Krishna Srinath as Scientist S-1 (Agrl. Extn) on transfer from Sugarcane Breeding Institute, Coimbatore, 1 March, 1980.

Shri M. P. Chandrasekharan as Assistant Accounts Officer at Cochin, 22 July, 1980.

The term of appointment of Dr E. G. Silas, Director of CMFRI has been extended for another period of five years or until further orders whichever is earlier, 25 June, 1980.

Shri K. R. Manmadan Nair as Scientist S-1 at Waltair on transfer from A. I. C. R. R. I, Hyderabad, 24 October, 1980.

Dr A. D. Diwan as Scientist S-2 (Animal Physiology) in CAS, Cochin, 29 December, 1980.

Shri N. J. Patel as Motor Driver (T-1) at Bombay, 18 January, 1980.

Shri P. Pasupathi Rao as Motor Driver (T-1) at Waltair 28 January, 1980.

Shri I. P. Ebenezer, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri K. S. Krishnan, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri M. Sriram, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri P. Ramadoss, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri S. K. Balakumar, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri P. Ramalingam, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri C. K. Dhandapani, Junior Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1977.

Shri R. Subramanian, S. S. Grade IV (Caretaker) as Field Assistant (T-1) at Mandapam Camp, 6 February, 1980.

Shri P. Thillairajan, S. S. Grade III (LA) as Field Assistant (T-1) at Tuticorin, 6 February, 1980.

Shri M. Enose, S. S. Grade III (L.A) as Field Assistant (T-1) at Cochin, 6 February, 1980.

Shri P. Thirumililu as Field Assistant (T-1) at Madras, 7 March, 1980.

Shri Joseph Stephenson as Bosun (T-I-3) at Mandapam

Camp, 26 April, 1980.

Shri A. D. Suwant as Field Assistant (T-1) at Bombay 19 May, 1980.

Shri P. Thankappan as Foreman (T-II-3) at Mandapam Camp, 29 May, 1980.

Shri Nirmal Mathew as Bosun (T-II-3) at Mandapam Camp, 3 June, 1980.

Shri K. K. Soman as Motor Driver (T-1) at Cochin, 18 July, 1980.

Shri K. J. Michael as Chief Engineer (T-6) at Cochin, 16 June, 1980.

Shri Xavier Mohandas as Motor Driver [T-1] at Cochin, 21 July, 1980.

Shri G. Balakrishnan, Sr. Technical Assistant [T-4] as Field Officer [T-6], 15 September, 1980.

Shri R. Vasanthakumar, Technical Assistant [T-I-3] as Technical Assistant [T-II-3] 15 September, 1980.

Shri C. K. Krishnan, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Smt. K. Koumudi Menon, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Shri K. Asokakumaran Unnithan, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Miss. S. Lakshmi, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Smt. C. Nalini, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Shri K. Thulasidas, Jr. Technical Assistant [T-2] as Technical Assistant [T-I-3], 1 July, 1978.

Shri A. Ganapathi, Jr. Technical Assistant (T-2) as Technical Assistant (T-I-3), 1 July, 1978.

Smt. P. R. Krishnakumari Amma, Computer (T-2) as computer (T-I-3), 1 July, 1978.

Shri A. Kanakkan, Computer (T-2) as computer (T-I-3) 1 July, 1978.

Shri O. M. Jainulabdeen, Serang (T-1) as Serang (T-2), 1 July 1978.

Shri P. Krishnan, Motor Driver [T-1] as Motor Driver [T-2], 1 July, 1978.

Shri O. Muthukaruppan, Motor Driver [T-1] as Motor Driver [T-2], 1 July, 1978.

Shri P. R. Leopold as Skipper [T-7] at Cochin, 23 October 1980.

Shri D. Padmanabhan as Driver [Boat] [T-1] at Mandapam Camp, 22 September, 80.

Shri K. Parasuraman as Deckhand [T-1] at Mandapam Camp, 16 September, 1980.

Shri C. Manibel as Deckhand [T-1] at Mandapam Camp, 16 September, 1980.

Shri S. Kesavan as Deckhand [T-1] at Mandapam Camp, 19, September 1980.

Shri Vali Mohamed as Cook [Boat] [T-1] at Mandapam Camp, 15 September, 1980.

Shri P. K. Velayudhan as Mate [T-6] at Cochin, 1 November, 1980.

Shri R. Uchimahali as S. S. Grade I [Lascar], 27 February, 1980.

Shri Y. Balu as S. S. Grade I (Oilman), 27 February, 1980.

Smt. N. S. Sarala as Jr. Clerk, 29 February, 1980.

Shri T. N. Padmanabha Kurp as Junior Clerk, 11 March, 1980.

Shri P. N. Rajasekharan Nair, as Junior Clerk, 12 March, 1980.

Shri C. S. Xavier as S. S. Grade I (Watchman) 24 March, 1980.

Shri A. Rajan as S. S. Grade I (Watchman) 24 March, 1980.

Shri V. Samayamuthu as S. S. Grade I (Watchman) 23 April, 1980.

Shri K. Velayudhan as S. S. Grade I (Watchman), 25 April, 1980.

Miss S. Sarada as Junior Clerk, 21 April, 1980.

Shri M. Balaraman as Junior Clerk, 10 June, 1980.

Shri P. K. Londhe as S. S. Grade I (Messenger), 17 May, 1980.

Shri P. Ganesan, Assistant on *ad hoc* basis as Assistant on regular basis, 28 May, 1980.

Shri K. M. Karupplah as Assistant on *ad hoc* basis, 31 May, 1980.

Shri S. Kalippan, S.S. Grade III (Khansama) as S. S. Grade IV (Khansama), 21 July, 1980.

Shri V. Ramachandran, S.S. Grade III (L A) as S. S. Grade IV (L A) 21 June, 1980.

Shri C. Mohamed Koya, S. S. Grade III (L A) as S. S. Grade IV (L A) 21 June, 1980.

Miss N. Gomathi as Junior Stenographer at Mandapam Camp, 7 August, 1980.

Shri L. Appa Rao as S. S. Grade I (Messenger) at Waltair, 19 September, 1980.

Shri R. Kalangiam, Junior Clerk as Senior Clerk on regular basis, 1 October, 1980.

Shri C. O. Viswambaran as S. S. Grade I (Safaiwala) at Cochin, 12 December, 1980.

Miss V. K. Valsa as S. S. Grade I (Safaiwala) at Cochin, 16 December, 1980.

Shri P. D. Karunakaran as S. S. Grade I (Safaiwala) at Cochin, 17 December, 1980.

Shri V. Prakasan as S. S. Grade I (Safaiwala) at KVK 20 December, 1980.

Smt. R. Devalakshmi, S. S. Grade I (Safaiwala) as S. S. Grade I (Messenger), 18 December, 1980.

General

Shri K. H. Mohamed, Senior Scientist rejoined at Cochin after completion of his FAO Assignment to Bahrain, Kuwait, 23 October, 1979.

Shri K. Dorairaj rejoined CMFRI in the post of S-1 at Mandapam Camp on reversion from Eel Culture Project, 1 April, 1980.

Dr N. Radhakrishnan, S-2 rejoined CMFRI at Bombay on reversion from EFP, 1 April, 80.

Shri R. P. L Sethu rejoined duty at Cochin after the expiry of deputation period of Assistant Administrative Officer at CPCRI, Calicut, 16 February, 1980.

Dr M. S Prabhu, Scientist S-3 rejoined CMFRI on reversion from deputation to IFP Cochin 1 March, 1980.

Shri K. C. George, Scientist S-2 awarded Ph. D. degree by the University of Cochin.

Transfers

Shri P. M. Aboobacker, Technical Assistant (T-11-3) from Cochin to Goa.

Shri R. Vasanthakumar, Technical Assistant (T-1) from Cochin to Vizhinjam.

Shri K. P. Viswanathan, Jr. Technical Assistant (T - 2) from Cochin to Waltair.

Shri Dalwadi P. M., Field Assistant (T-1) from Bombay to Dahanu.

Shri V. Achutha Rao, Field Assistant (T-1) from Waltair to Palasa.

Shri M. Narayana, Field Assistant (T-1) from Karwar to Goa

Shri K. Maragathavadivelu, Senior Clerk from Cochin to Mandapam Camp, 17 February, 1979.

Shri V. Balan, Scientist from Calicut to Cochin.

Dr. M. D. K. Kuthalingam, Scientist from Vizhinjam to Madras.

Shri S. B. Shitole, Field Assistant (T-1) from Bombay to Ratnagiri.

Shri N. Palaniswamy, Jr. Technical Assistant (T - 2) from Ratnagiri to Tuticorin.

Shri D. G. Jadhav, Field Assistant (T-1) from Bombay to Malvan.

Shri D. Sunderarajan, Jr. Technical Assistant (T - 2) from Malvan to Cuddalore.

Shri J. P. Karbari, Field Officer (T-6) from Veraval to Bombay.

Shri P. Ramalingam, Jr. Technical Assistant (T - 2) from Waltair to Kakinada.

Shri S. Kemparaju, Field Assistant (T-1) from Karwar to Goa.

Shri T. S. Balasubramanian, Jr. Technical Assistant (T-2) from Karwar to Goa.

Shri A. Ahamed Kamal Basha, Field Assistant (T-1) from Goa to Mangalore.

Shri O. M. M. J. Habeeb Mohamed, Jr. Technical Assistant (T-2) from Mangalore to Tuticorin.

Shri V. S. Gopal, Field Assistant (T-1) from Cochin to Alleppey.

Shri M. Babu Philip, Technical Assistant (T-II-3) from Alleppey to Quilon.

Shri K. Ramachandran Nair, Technical Assistant (T-II-3) from Quilon to Vizhinjam.

Shri S. Subramani, Jr. Technical Assistant (T-2) from Madras to Mandapam Camp.

Shri B. China Appa Rao, Field Assistant [T-1] from Waltair to Kakinada.

Shri Raveendran Andi, S. S. Grade III (Fieldman) from Bombay to Narakkal.

Shri A. Gopinathan, S. S. Grade I [Safaiwala] from Calicut to Cochin.

Shri C. Johnson, Jr. Clerk from Mandapam Camp to Cochin.

Shri P. N. Radhakrishnan Nair, Junior Scientist from Mandapam Camp to Vizhinjam.

Shri S. S. Dan, Field Officer [T-6] from Waltair to Junput.

Shri Sudhakar K. Sonar, Field Assistant [T-1] from Bombay to Ratnagiri.

Shri N. Palaniswamy, Jr. Technical Assistant [T-2] from Ratnagiri to Chavakad.

Shri S. Mani S. S. Grade, III (Fieldman) from Madras to Tuticorin.

Shri G. Nandakumar, Scientist S-1 from Mandapam Camp to Karwar.

Shri B. Krishnamoorthy, Scientist S-3 from Waltair to Madras.

Shri P. E. Sampson Manickam, Scientist S from Waltair to Mandapam Camp.

Shri M. Rajamani, Scientist S-1 from PCL, Narakkal to Tuticorin.

Smt. Mary K. Manisseri, Scientist S-1 from Tuticorin to PCL, Narakkal.

Shri Jacob Jerald Joel, Technical Assistant (T-II-3) from Mangalore to Vizhinjam.

Shri N. Palanisamy, Jr. Technical Assistant (T-2) from Chavakad to Cochin Fishing Harbour Field Centre.

Shri Mascarenhas Robert, Field Assistant [T-1] from Goa to Mangalore.

Shri Ankam Vijay Kumar, Field Assistant (T-1) from Bombay to Janjira Murud.

Shri Uday, B. Pawar, Field Assistant (T-1) from Bombay to Janjira Murud.

Shri C. J. Josekutty, Field Assistant (T-1) from Janjira Murud to Bombay.

Shri P. Krishnan, Motor Driver (T-1) from Tuticorin to Mandapam Camp.

Shri Xavier Mohandas, Motor Driver (T-1) from Tuticorin to Cochin.

Shri A. Agastheesa Pillai Mudaliar, Technical Assistant (T-II-3) from Mandapam Camp to Madras.

Shri V. A. Narayanan Kutty, Junior Technical Assistant (T-2) from Cochin to Goa.

Shri D. Padmanabhan, Driver (Boat) (T-1) from Mandapam Camp to Madras.

Shri K. Parasurama, Deckhand (T-1) from Mandapam Camp to Madras.

Shri C. Manilai, Deckhand (T-1) from Mandapam Camp to Madras.

Shri S. Kesavan, Deckhand (T-1) from Mandapam Camp to Madras.

Shri Vali Mohamed, Cook (Boat) (T-1) from Mandapam Camp to Madras.

Shri P. Viswanathan, S. S. Grade IV (Fieldman) from Cochin to Calicut.

Shri A. Sethubaskaran, Superintendent from Cochin to Mandapam Camp.

Shri J. Uthamanambi, Sr. Clerk from Cochin to Mandapam Camp.

Shri R. Kalanjiam, Jr. Clerk from Karwar to Cochin.

Shri K. Ganesan, S. S. Grade I (Watchman) from Narakkal to Cochin.

Shri P. K. Sakkarai, Assistant from Cochin to Mandapam Camp.

Relief :

Shri S. K. Karunakaran, Jr. Technical Assistant (T-2) on resignation, 16 October, 1978.

Shri D. L. Chindarkar, Field Assistant (T-1) on resignation, 23 December, 1978.

Shri Appala Raju, Field Assistant [T-1] on resignation, 17 January, 1979.

Shri G. Surendranath, Jr. Technical Assistant [T-2] on resignation 16 November 1978.

Shri K. V. George, Senior Training Assistant [T-6] at KVK to take up appointment as Project Officer under Co-operative Intensive Prawn Farming Project, Narakkal, on depu-

tation on foreign service basis, 21 February, 1979.

Shri T. A. Sankarankutty, Computer (T-2) on resignation, 19 March, 1979.

Shri S. B. Shitole, Filed Assistant (T-1) at Bombay on resignation, 30 March, 1979.

Shri N. Sundaram, Jr. Technical Assistant (T-2) to take up appointment as Administrative Officer in Central Agricultural Research Institute, Port Blair, 18 April, 1979.

Shri P. D. Johnson, Foreman (T-II-3) at Mandapam Camp on resignation 19 June, 1979.

Shri G. B. Naik, S. S. Grade I (Watchman) at Karwar on termination 12 March, 1979.

Miss U. Sujathakumari Jr. Clerk on termination, 24 March, 1979.

Shri P. Thomas, S. S. Grade IV (LA) on superannuation 30 April, 1979.

Shri Mohamed Moideen, S. S. Grade IV on Superannuation, 30 June, 1979.

Shri J. Williams, Motor Driver (T-2) at Tuticorin on Superannuation, 31 August, 1979.

Shri K. Dharma Rao, Motor Driver (T-1) at Waltair on termination 31 August, 1979.

Shri Y. Venkatachalam Jr Clerk on resignation, 16 November, 1979.

Dr. C. M. James, Scientist S. K V K, Narakkal on resignation, 28 May, 1980.

Dr B. D. Antony Raja, Scientist S-2 on confirmation with Ministry, 1 March, 1980.

Shri Thakar B. Rajendra, Field Assistant (T-1) at Bombay on resignation, 1 April, 1980.

Shri M. Alimanikfan, Museum Assistant (T-2) at Man-

dapam Camp, on Superannuation 27 April, 1980.

Shri B. Chinna Appa Rao, Field Assistant (T-1) on termination 1 May 1980

Shri V. G. Patel, Field Assistant (T-1) at Bombay on resignation, 1 May 1980.

Shri P. Sudhakar, Field Assistant (T-1) at Junput on resignation, 10 December 1979.

Shri N. J. Patel, Motor Driver (T-1) at Bombay on termination, 16 June 1980.

Shri K. D. Mathai, Motor Driver (T-1) at Cochin on termination, 30 June, 1980.

Shri E. K. Raveendran, Technical Assistant (T-II-3) to take appointment as Fisheries Officer in Andaman & Nicobar Administration, Port Blair.

Shri Joseph Stephen, Bosun (T-II-3) on resignation, 30 June, 1980.

Shri P. K. Raghavan, Motor Driver (T-2) on superannuation, 30 September, 1980.

Shri Uday B. Pawar, Field Assistant (T-1) at Janjira Murud on resignation, 1 November, 1980.

Shri Sudhakar K. Sonar, Field Assistant (T-1) on resignation, 2 December, 1980.

Shri K. Velayudhan, Jr. Clerk on resignation, 22 January 1980.

Shri D. M. Victor Gnanaraj, Assistant on Voluntary retirement, 31 January, 1980.

Shri G. Karunakaran, S. S. Grade III (LA), 31 January, 1980.

Shri D. S. Harijan, S. S. Grade I (Safaiwala), 22 March, 1980.

Shri P. C. Appukuttan S. S. Grade I (Safaiwala) on resignation, 10 April, 1980.

Shri N. Thankappan Kani, S. S. Grade I (Safaiwala) on resignation, 17 April, 1980.

Shri G. Sivalingam, S. S. Grade I (Safaiwala) on resignation, 18 September, 1980.

Shri V. M. Kanaran, S. S. Grade III (LA) on Superannuation, 30 September 1980.

Shri M. S. Sayed Ahmed, S. S. Grade, III (LA) on superannuation, 31 October, 1980.

Shri M. C. Tampi, S. S. Grade I (Watchman) on resignation, 15 October, 1980.

Shri M. J. Chandy S. S. Grade I (Watchman) on termination, 1 October, 1980.

Shri B. F. Kharat, S. S. Grade I (Watchman) on resignation, 31 December, 1980.

OBITUARY

Shri E. Vellayan, S. S. Grade III (Fieldman) at Mandapam camp, expired, 6 March, 1979.

Shri K. P. Raghavan, S. S. Grade III (Fieldman) at Calicut expired, 9 April, 1979.

Shri K. A. M. Koya, Motor Driver (T-1) at Vizhijam expired, 1 July, 1979.

Shri K. Rajasekharan, Senior Technical Assistant (T-4) expired, 20 December, 1979.

Shri S. Gopalakrishnan Potti, Accounts Officer, expired, 4 January, 1980.

Shri P. Muthu, Assistant expired, 16 June, 1980.

Shri A. Narayana Gokhale, Sr Clerk expired, 6 October, 1980.