

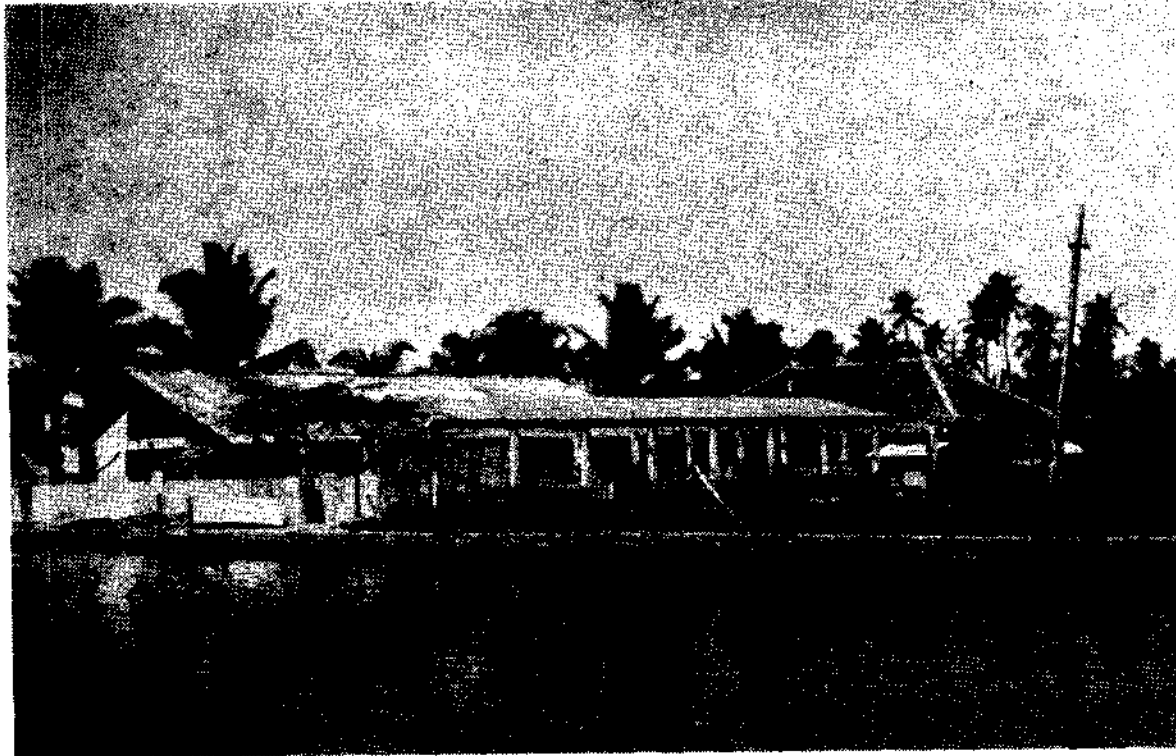


CMFRI newsletter

Number 15

January - March 1982

NPCL Achieves Record Growth of White Prawns



A view of Narakkal Prawn Culture Laboratory

Indian white prawns, *P. indicus* (Naran) of marketable size were harvested at Narakkal Prawn Culture Laboratory (NPCL) of CMFRI within a short period of 49 days of stocking, against the usual period of 90 to 120 days. Farm-bred seeds (F-3 generation) produced at

NPCL were stocked in 0.1 hectare grow-out pond on 1 February. At harvest after 49 days marketable size prawns measured 135 mm length and weighed 16.7 g with head-on count of 60 per kg.

The prawn seeds were stocked in the pond at the rate

of 44,000 per hectare. The average weight gain per day was 0.339 g which is a record growth for this species in a regular culture system. No extra feed was given and they had utilised only the naturally available food in the grow-out pond. This small water area of 0.1 ha yield-

ed 59.25 kg of prawns with a recovery rate of 82%. The prawns fetched Rs 40 per kg. The factors responsible for such fast growth are being investigated and standardised. The results of the experiment have attracted the attention of number of local marginal farmers and ex-trainees of KVK and the demand has increased for farm-bred prawn seeds and technical help. Based on the results achieved the farmers believe that they will be able to take several harvests, at least three in a period of eight months, from the traditional prawn fields of the Vypeen Island when the fields are free after harvest of rice.

Gastropods in Pearl Oyster Beds

The thickly populated beds of pearl oyster in the Gulf of Mannar have shown presence of large number of predatory gastropods (*Cymatium* and *Murex*) resulting in mortality of some of the natural population. The oysters from the natural beds had to be carefully checked before transplantation to the pearl oyster farm to prevent accidental entry of the predators.

Shark Landed at Chettykad

A shark measuring 31 ft and weighing 1500 kg, greyish with purplish spots all over the body, locally called *virikam* was landed at Chettykad North near Alleppey on 1 January. The shark was caught by a drift net of a mechanised unit at about 20 fathoms, 8km off the shore. Two mechanised boats were engaged to bring the

shark to the shore. The flesh was cut and sold and the liver weighing about 20 kg sent for extracting oil. This report came from Shri M. Babu Philip, Technical Assistant, Quilon Field Centre.

Unusual Landings of *Doclea* at Nagore

A rare instance of huge landings of the crab *Doclea* numbering about 1 lakh was recorded at Nagore on 19 January. The entire catch was landed by non-mechanised gill nets locally known as *vala valai* operated at a distance of 16 km from the shore at a depth of about 9 fathoms. The entire catch was discarded by burying in the sand since the species is neither eaten nor converted into man-

ure by local people. The crab is known as *Karandava nandu*, locally, since a sensation similar to electric shock is felt when holding it. This was reported by Shri K. S. Krishnan, Technical Assistant, Nagapattnam Field Centre.

Fire Accident in Fishing Village

In a fire accident at Karwar on 23 January, several huts of fishermen were gutted and some *rampan* units consisting of boats, canoes, fishing nets and ropes were either totally destroyed or damaged. As per the estimates of the owners of these units, total property worth about 8.9 lakhs was damaged. CMFRI is making an assessment of the loss and damages and its impact on the fish production of the area.

Various Training Courses in Fish/Prawn Farming Conducted by KVK (1977-1981)

| Duration of training | number of courses | Total number trained | Men | Women | SC Trainees | |
|----------------------|-------------------|----------------------|-----|-------|-------------|-------|
| | | | | | Men | Women |
| 1 month | 11 | 135 | 135 | — | 41 | — |
| 20 days | 3 | 53 | 53 | — | 28 | — |
| 15 days | 4 | 75 | 75 | — | 19 | — |
| 10 days | 35 | 666 | 392 | 274 | 128 | 138 |
| 5 days | 7 | 118 | 76 | 42 | 13 | 19 |
| Total | 60 | 1047 | 731 | 316 | 229 | 157 |

Sukumar Basu Memorial Award to CMFRI Scientists

The Second Sukumar Basu Memorial Award instituted by IARI was won by a team of Scientists of CMFRI lead by Shri K. H. Mohamed and consisting of Shri M. S. Muthu, Shri N. Neelakantan Pillai, Dr A. Laxminarayana and Dr S. Kulasekharapandyan for developing scientific methods for artificial breeding of prawn under controlled conditions leading to the mass production of prawn seeds. Marine prawn which normally breeds in the deeper regions of the sea have been domesticated in the laboratory and it is now possible to obtain seeds from farm-reared prawns which had never been to the sea. The above method has immense value in developing prawn culture utilising the vast stretches of unused coastal brackishwater marshes, creeks and lagoons in the country.

The award was distributed by Shri Hidayatulla, Vice President of India at the IARI convocation at New Delhi. The award instituted for outstanding research in agriculture including animal husbandry and forestry has a cash component of Rs 10,000/- and a scroll which was also shared by Dr Y. P. Abrol of IARI for his work in nitrogenous fertilizers.

A farmer taking his consignment of prawn seeds from NPCL



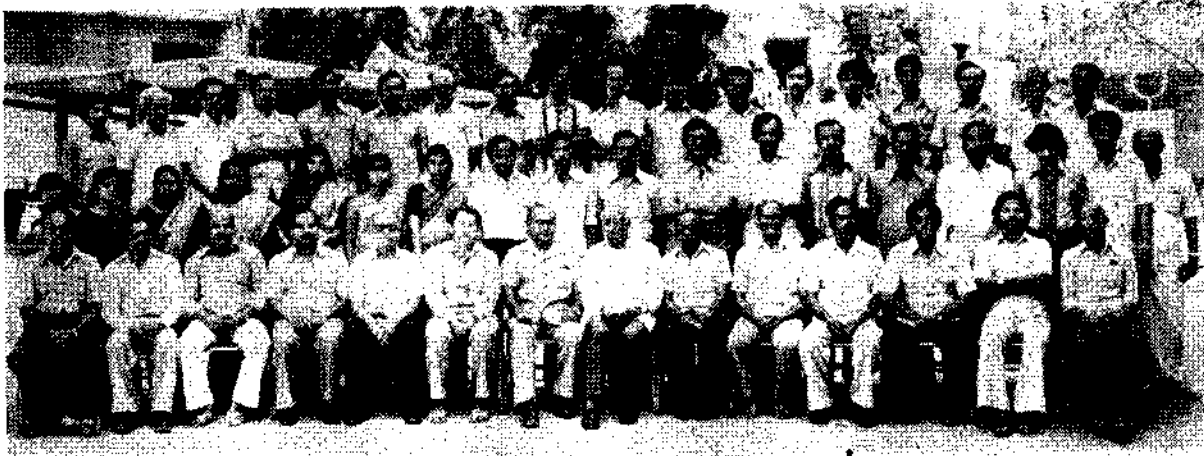
Shri K. H. Mohamed at work



Prawns cultured at NPCL



Training Programme in Fishery Statistics



Participants in the training programme and staff of FRA Division with Prof. W. H. Abdi, Head of Maths and Stat. and Dr Peter Blanksby, Visiting Professor, Cochin University, at the valedictory function

The training programme in fishery statistics including population dynamics was conducted this year, for six weeks from 18 January to 27 February by the Fishery Resources Assessment (FRA) Division. This is the third such training offered to research and technical personnel involved in fisheries research and development in various research institutes, State and Central Government departments and universities. The intake of this course is 10 to 14 trainees. The course contents of the training covers the following topics with extensive practicals. To assess the progress of the candidates, tests are given periodically. The syllabus for the training is as follows.

General introduction to the fisheries science, basic mathematics required for this training, introduction to statistical methods, sample surveys and design of experiments, population dynamics covering estimation of vital statistics such as growth and mortality, growth and yield

curves and economic evaluation of aquaculture practices.

This year, eleven trainees, four from state fisheries departments representing Orissa, Andhra Pradesh and Maharashtra; two from universities, representing Fisheries College, Mangalore, Karnataka Agricultural University and Fisheries College, Cochin, Kerala Agricultural University and five from CMFRI attended the programme.

The following were the participants.

Shri Alexander Kurian
Bombay Research Centre of
CMFRI, Bombay

Shri C. P. Gopinathan
Tuticorin Research Centre of
CMFRI Tuticorin

Dr T. M. Jose
Fisheries College, Cochin
Kerala Agricultural University

Shri C. H. Krishna Bhat
Fisheries College, Mangalore
Karnataka Agricultural University

Shri C. H. Krishnam Raju
State Fisheries Department,
Andhra Pradesh

Shri M. J. Mahajan
State fisheries Department
Maharashtra

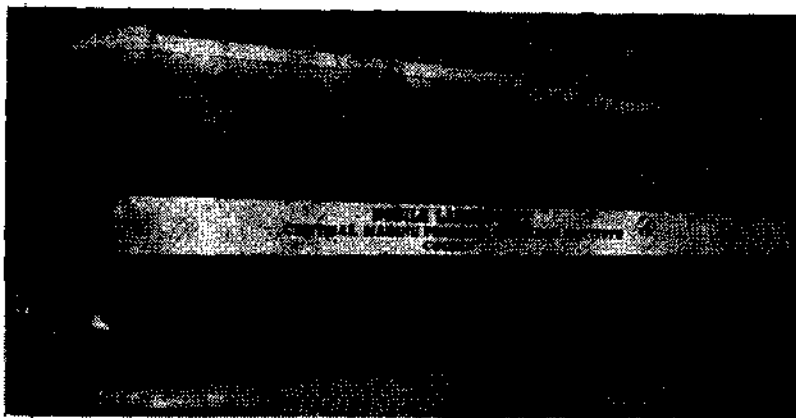
Shri M. M. Meiyappan
C M F R I, Cochin

Shri G. B. Parida
State Fisheries Department
Orissa.

Shri C. H. Seshasayana Rao
State Fisheries Department
Andhra Pradesh

Dr V. Sriramachandra Murthy
Kakinada Research Centre of
CMFRI
Kakinada

Shri K. K. Sukumaran,
Mangalore Research Centre of
CMFRI
Mangalore



Mobile Laboratory

Mobile Laboratory for CMFRI

A mobile laboratory fully equipped to carry out environmental monitoring programmes and render suitable advice on water bodies for introducing finfish and shellfish culture has been set up by CMFRI. The mobile laboratory can also carry out investigations when mortality of fish occurs due to aquatic pollution. The driver's cabin of the laboratory provides accommodation for four scientists and one technician. The total cost of mobile lab is approximately Rs 3.9 lakhs.

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CADALMIN V meant for Waltair Research Centre of CMFRI has been taken over.

* * *

Three plots of land measuring about 0.5 hectares including the existing office building

and coconut trees at Minicoy have been acquired for Minicoy Research Centre of CMFRI from the Union Territory of Lakshadweep Administration.

Current Awareness Service

Current Awareness Service for dissemination of current information from the publications received in the library to the scientists and technical staff has been introduced at the library at CMFRI headquarters at Cochin. A Book Alert Service has also been introduced recently.

Eradication Demonstration

An eradication demonstration with ammonia was held by KVK in three ponds belonging to *Vikasana Samithi* at Puthuvypu, a Society organised by the Field Publicity Office of Government of India where one of the KVK trainees is directly involved in polyculture. The demonstration

was attended by large number of farmers.

Project Finalisation Meetings

A series of meetings was held at Cochin from January 25 to 30 1982 among the division heads, officers-in-charge of research centres and project leaders to finalise the research projects to be taken up for the year, 1982-83. During these meetings, the progress made during 1981-82 in the continuing projects was critically evaluated and the constraints, if any, in implementation was examined. Taking into consideration the major thrusts proposed for the VI Plan of the Institute, reorganisation of the existing divisions (see page 8) and also CMFRI'S programmes under education, training and extension, the existing projects were revised and reoriented wherever necessary and new projects were proposed in priority areas. The project proposals were finally discussed with the Director for approval and later presented to the Management Committee.

* * *

A National Workshop on Acquisition and Dissemination of Data on Marine Living Resources of Indian Seas is proposed to be held at CMFRI in October.

Workshop on Fish and Shellfish Nutrition

A workshop on Methodology for finfish and shellfish Nutrition led by Dr Akio Kanazawa was organised by CAS in Mariculture, CMFRI at Cochin during 11-16 January. Scientists from the Agriculture Universities of Tamil Nadu, Karnataka and Kerala were invited to the workshop. Five Scientists and 12 research scholars from CMFRI also participated.

Five more seminars were organised on following themes:

1. Characteristics of lipids in marine organisms
2. Crustacean nutrition
3. Microparticulate diets and larval stage nutrition
4. Sterol metabolism in shellfish
5. Sterol hormones in marine animals.

These seminars were organised during Dr Kanazawa's visit. The teachers and students of the Department of Marine sciences and Industrial Fisheries of the University of Cochin besides the scientists of CMFRI and students of the centre of Advanced studies in Mariculture attended these seminars.

In the first seminar the consultant presented the unique nature of marine lipids especially the composition of highly unsaturated fatty acids and their effect on lowering of cholesterol levels in the human blood and the requirement of highly unsaturated fatty acids in the diet of marine organisms.

One of the recent advancements in the culture of larval crustaceans, molluscs and fishes has been the introduction of microparticulate diets, as an alternative to the live food or-



Dr Kanazawa released the manual on Fish and Shellfish Nutrition to Dr C. V. Kurian, Emeritus scientist

ganisms. Dr Kanazawa, besides explaining methods for preparation of a variety of micro-

particulate diets, also indicated their advantage over feeding of live food organism.

Expert Consultancy by Dr Kanazawa

Dr Kanazawa's programme at the CAS in Mariculture included consultations on fish and shellfish nutrition with scientists specialising in the area of fish and shellfish nutrition, group discussions, seminars, visit to research centres of CMFRI at Narakkal, Mandapam, Tuticorin and Vizhinjam. A national workshop on Fish and Shellfish Nutrition was held. The syllabi on nutrition for M Sc and Ph D programmes, were discussed and revised. Research project formulation and facilities required for fish and shellfish nutrition laboratory were also discussed.

During the course of the discussions. Dr Kanazawa indicated the requirements of proteins, energy, lipids, carbohydrates, fatty acids, sterols, phospholipids, vitamins, miner-

als etc. in the diet of fishes and crustaceans. The inability of the crustaceans to synthesize cholesterol from acetate and mevalonate precursors was also indicated by the consultant. The need for addition of lecithin cholesterol, glucosamine, sucrose and eicosapentaenoic and docosahexaenoic fatty acids in the diet of crustaceans was discussed.

Seven group discussions were held on special problems in nutrition and feeding of finfish and shellfish at Cochin, Narakkal, Mandapam and Tuticorin. These discussions dealt with practical problems in the food selection and feeding of larval juvenile and adult fish, crustaceans and molluscs, nutrition and diseases associated with the deficiency or excess of nutrients in diets in fish and shellfish.

VISITORS

His Excellency the Governor of Tamil Nadu, Shri Sadiq Ali visited Mandapam Regional Centre on 8 January. HE the Governor was received and shown round the different research activities in progress.

Hon'ble Union Minister of State for Communication, Shri Yogendra Makwana visited Minicoy Research Centre when he visited Minicoy Island on 14 January. Hon'ble Minister inaugurated the fisheries exhibition arranged by the Research Centre. A large number of fishermen, officials of different departments and students also visited the exhibition which was kept open for three days.

Dr R. M. Acharya, Deputy Director-General (Animal Sciences) ICAR, New Delhi visited CMFRI headquarters and its Bombay Research Centre.



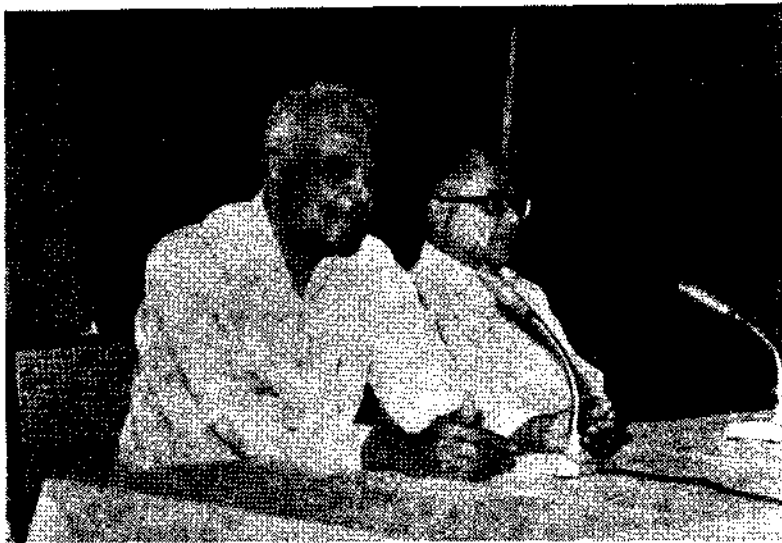
H E The Governor studing the research activities



Dr Acharya addressing the staff

Hon'ble Minister at the exhibition





Dr H. R. Arekere Chairman, ASRB addressing the scientists during his visit in January

Shri Salim Ali, renowned ornithologist and his colleague Dr. S. A. Hussain visited Mandapam Regional Centre on 20 February to study the migratory pattern of birds from India to Srilanka and *vice versa*. A film on Birds and bird migration brought by him was screened and he had discussions with the residents of the area. Dr Salim Ali also watched the fishing operations on board Cadalmin II

Prof. Y. Shrikrishna, CIFE Bombay with 36 trainees visited Vizhinjam Research Centre.

Batches of students from the following colleges visited Karwar Research Centre.

DBJ College, Chiplum, Ratnagiri.

RVV College, Dhavanikota, Guntur.

SSVP Science College, Dhulia.

A G College, Pune

Bangalore University, Bangalore.

Dr A. Prakash, World Health Organisation Consultant and a team from Central Pollution Control Board, New Delhi visited Tuticorin Research Centre.

Dr Tiber Faruas, Institute of Biochemistry, Biological Research Centre, Hungarian Academy of Science, Hungary visited Bombay Research Centre, 20 February.

Consultant in Fish Diseases

Dr Ronald J. Roberts, Director, Institute of Aquaculture, University of Stirling, U K visited CAS, CMFRI, Cochin during 5-10 March to provide expert advice on different aspects of finfish and shellfish diseases. The Institute headed by Dr Roberts specialises in fish pathology and offers postgraduate course in the same. During his visit Dr Roberts discussed different subjects of topical interest with scientists and research scholars of CMFRI and gave two seminars on fish pathology. Dr Roberts also visited the KVK and the Lab-to-Land village.

Shri K. K. Varghese, Technical Officer, ARDC, Madras visited Tuticorin Research Centre, of 10 March.

Dr David Hepell, Curator of Mollusca, Royal Scottish Museum, Edinburgh, Scotland visited Mandapam and Tuticorin Centre.

A team of journalists, led by Public Relations Officer of ICAR, New Delhi visited CMFRI and its different Projects around Cochin.

Reorganised Research Set Up

| Division | Division Head |
|-------------------------------------|----------------------------|
| Fishery Resources Assessment | Shri G. Venkataraman |
| Pelagic Fisheries | Shri K. V. Narayana Rao |
| Demersal Fisheries | Dr B. Krishnamoorthy |
| Crustacean Fisheries | Shri K. H. Mohamed |
| Molluscan Fisheries | Dr K. Alagarwami |
| Fishery Environment Management | Dr P. V. Ramachandran Nair |
| Physiology, Nutrition and Pathology | Dr P. Vedavyasa Rao |
| Fisheries Economics and Extension | Shri T. Jacob |
| Library and Documentation | Shri K. N. Krishna Kartha |

Officials of CMFRI attended the Following Meetings

Shri K. A. Narasimham Scientist S-2 participated in the Workshop on Bivalve Culture jointly organised by the Primary production Department of Ministry of National Development, Singapore and International Development Research Centre, Canada at Singapore from 16-19 February. Shri Narasimham presented a paper on the Present status of marine bivalve culture in India.

Dr R. S. Lalmohan, Scientist S-1 at Mandpam Camp was deputed to the Seventh Orientation Course in Agricultural Research Management, N A A R M at Hyderabad, 22 January to 17 February

Dr. S. Ramamurthy, Scientist S-3 attended the Seminar on Prospects of aquarium fish exports from India organised by MPEDA in Association with CIFE, Bombay, 11 February.

Shri S. Mahadevan, Scientist S-2 attended All India symposium on fish diseases organised by Fisheries College, University of Agricultural Sciences at Mangalore, 1-4 March.

Shri P. Karunakaran Nair, Senior Training Assistant at KVK attended the Rural Programme Advisory Committee Meeting of All India Radio, Trichur.

Dr E. G. Silas, Director attended the following meetings.

The 108th Meeting of the Executive Committee of the Kerala Agricultural University at Calicut, 4 January.

Visiting ICAR team to inspect the research set up etc. at the Bangalore University and to recommend the University for the recognition of ICAR, 4 January.

Inauguration of Workshop on Aquaculture at Fisheries college, Tuticorin.

The Third Meeting of the Central Coordination Committee on National Fishery Survey of India at Krishi Bhavan, New Delhi, 2 March.

The Annual General Body Meeting of ICAR Society as instructed by Director-General, ICAR, 20 March.

Dr E. G. Silas has been reappointed member of MPEDA. Dr Silas is also to serve as Member, Committee constituted by Government of Kerala to study the need for conservation of marine fishery resources during certain seasons and allied matters.

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All the four Senior Research Fellows of first batch of Ph.D programme appeared for Ph.D qualifying examination of the Cochin University and have passed.

x x x x

Annual Day of the Staff Recreation Club of Tuticorin Research Centre was celebrated on 31 March. The annual Sports meet of the staff members was also conducted and prizes given to winners.

x x x x

The second phase of the Short term course in mussel culture concluded its session on 6 March.

STAFF NEWS

Appointments

Shri J. P. Kharbari, Field Officer (T-6) as Field Officer (T-7) at Bombay, 1 July.

Shri D. B. S. Sehara as Scientist S-2 (Agrl. Economics) at Cochin 20 February.

Shri N. S. Hamshaas Junior Stenographer at KVK Narakkal, 13 January.

Kumari N. R. Latha Devi as Junior Stenographer at Cochin, 15 March.

Miss K. V. Sajeetha as Junior Stenographer at Cochin, 15 March.

Kumari P. I. Rosy as Junior Clerk at Cochin 1 March.

Shri M. Ramachandran as Punch Card Operator (T-1) at Cochin, 18 January.

Shri Jadraja Vanrajsinh as Field Assistant (T-1) at Veraval, 18 January.

Karwar Research Centre of CMFRI participated in the exhibition arranged by the Fisheries Department of Karnataka from 26-27 January. Models of prawn culture farm and mussel culture raft were exhibited by the Research Centre.

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Shri K. V. Narayana Rao, will be the new secretary to the Staff Research Council consequent to the relief of Dr M. S. Prabhu on superannuation.

Shri K. K. Bose as Driver (Boat) (T-1) at KVK Narakkal, 25 January.

Shri R. Sekar as Deckhand (T-1) at Mandapam Camp, 25 January.

Shri U. Alagamalai as Deckhand (T-1) at Cochin, 2 February.

Shri Ishwara Naik as Field Assistant (T-1) at Mangalore, 5 March.

Shri K. Anbalagan as Driver (Boat) (T-1) at Waltair, 19 March.

Shri A. Kumar as Field Assistant (T-1) at Kovalam, 25 March.

Shri C. S. Xavier, S. S. Grade I (Watchman) as Motor Driver (T-1) at Cochin, 11 January.

Shri S. Tatabhai as S. S. Grade I (Messenger) at Kakinada, 16 January.

Shri K. T. Rajappan as S. S. Grade I (watchman) at Cochin, 24 January.

Shri R. Srinivasan as S. S. Grade I (Messenger) at Calicut, 5 February.

Shri K. S. Pradeepkumar as S. S. Grade I (Messenger) at Vizhinjam, 17 February.

Shri Pratapkumar Das as S. S. Grade I (Messenger) at Contai, 31 March.

Shri H. M. Bhint as S. S. Grade I (Messenger) at Veraval, 9 February.

Shri Thomas Kuruvilla, as S. S. Grade I (Messenger) at Cochin, 15 March.

Shri P. P. John, as S. S. Grade I (Messenger) at Cochin, 19 March.

Shri A. Gandhi, as S. S. Grade I (Oilman) at Mandapam Camp, 31 March.

Shri J. Padmanabhan, as S. S. Grade I (Lascar) at Mandapam Camp, 31 March.

Transfers

Shri S. Mahadevan, Scientist S-2 from Tuticorin to Mandapam Camp.

Shri M. Mydeen Kunju, Scientist S-2 from Calicut to Cochin.

Shri C. Mukundan, Scientist S-2 from Cochin to Vizhinjam.

Shri A. Noble, Scientist S-2 from Cochin to Mangalore.

Shri G. Luther, Scientist S-2 from Vizhinjam to Waltair.

Dr K. Satyanarayana Rao, Scientist S-2 from Mangalore to Tuticorin.

Shri C. P. Gopinathan, Scientist S-1 from Cochin to Tuticorin.

Kumari Padmini, Scientist S-1 from Mangalore to Cochin.

Shri N. Surendranatha Kurup, Scientist S-1 from Cochin to Calicut.

Shri K. T. Thomas Paul, Bosun (T-II-3) from Mandapam Camp to Tuticorin.

Shri Mohideen Abdul Kader, Driver (Boat) (T-1) from Mandapam Camp to Tuticorin.

Shri D. Bosco Fernando, Deckhand (T-1) from Mandapam Camp to Tuticorin.

Shri D. Anandan, Deckhand (T-1) from Mandapam Camp to Tuticorin.

Shri S. Enasteen, Deckhand (T-1) from Mandapam Camp to Tuticorin.

Shri R. Arockiasamy, Deckhand (T-1) from Mandapam Camp to Tuticorin.

Shri M. Rengan, Cook (Boat) (T-1) from Mandapam Camp to Tuticorin.

Relief

Dr P. S. B. R. James, Joint Director (S-3) on appointment as Assistant Director General (Fisheries) at ICAR Headquarters, 10 February.

Dr M. S. Prabhu, Scientist S-3 on superannuation, 31 March.

Shri P. Mojumder, Field Officer (T-6) on superannuation, 31 March.

Shri K. Parameswaran Nair, S. S. Grade III (L.A) on superannuation, 31 March.



Shri Parameswaran Nair receiving memento from the Director

Shri K. J. Michael, Chief Engineer (T-6) on resignation, 18 January.