



CMFRI NEWSLETTER

July - December - 1998, No. 84

RESEARCH HIGHLIGHTS

Successful breeding of groupers

Success has been achieved in breeding the grouper "*Epinephelus tauvina*" in the onshore indoor recirculating culture facility at the mariculture field laboratory, Cochin. It is the first attempt of breeding of protogynous marine finfish in the country. Groupers realise high prices in the export market. After a 3 year long experiment, by undergoing sex reversal treatment and maturation these fishes spawned spontaneously (without inducing the function of spawning), in captivity. A total of 2,00,000 viable eggs were released in one batch of spawning. Cent percent fertilisation was observed. Eggs hatched out after 22 hours and larval rearing experiments are under way.

Successful breeding of clown fish

The Vizhinjam Research Centre and Mandapam Regional Centre have been successful in the breeding of clown fish *Amphiprion chrysoaster*, a potential marine ornamental fish in captivity. Larval rearing techniques are witnessing success at Vizhinjam and Mandapam. Few larvae metamorphosed and attained the juvenile stage. A batch of larvae has reached 6-8 mm size.

Breeding and spawning of cuttle fish, *Sepiella inermis* in the laboratory of Tuticorin was achieved for the first time. Eggs collected from wild were maintained in the laboratory. Mating and spawning occurred after a period of two months. Hatchlings were reared on mysids initially and later on acetes. The

hatchlings attained maturity in 75 days. This achievement widens the scope for promoting cephalopod culture in India.

Technological Advances in Pearl Oyster

A good settlement of pearl oyster spats was observed close to off Kaswar Island wherein pearl oyster spats were sea ranches during 1985-89.

About 6 lakh pearl oysters have been supplied to Mandapam for pearl culture work.

For culture work at Vizhinjam 15000 pearl oysters were transported from Tuticorin

An air- conditioned pearl oyster surgery room was established and made operational at Mandapam.

Inauguration of the Marine Hatchery Complex and Residential Complex of CMFRI.

The multi species marine hatchery complex was inaugurated by Padmabhushan Dr. R.S. Paroda, Director General, ICAR and Secretary, Department of Agricultural Research and Education on 8 December. Dr. K. Gopakumar DDG (Fisheries) Dr. P. Das, Deputy Director General (Extension), Dr. M. Devaraj, Director, CMFRI, Shri.Mehta, Chief Engineer

and Shri Ramakrishnan, Supdt. Engineer, CPWD were the dignitaries present on the occasion.

The marine hatchery complex with an area of 659 Sq.m. is a multipurpose one with facilities to conduct studies on the induced maturation and captive broodstock development of sev-

eral marine finfish species with special emphasis on groupers, a commercially important fish.

The complex has specially designed concrete tanks of 2.2m depth with an efficient recirculation system with biological filters through which high quality of water is maintained.

It is also equipped with facili-



Residential Complex inauguration by Dr. R.S. Paroda, DG, ICAR.



CMFRI Marine Hatchery Complex being inaugurated by Dr. R.S. Paroda, DG, ICAR.

Dr. R.S. Paroda, DG, ICAR inaugurated the Marine Hatchery Complex at Calicut.

Padmabhushan Dr. R.S. Paroda, Director General, ICAR and Secretary, Department of Agricultural Research and Education inaugurated the newly built Marine Hatchery Complex at the Calicut Research Centre of CMFRI on 7th December, 1998 in the presence of Shri. Manoj Joshi, District Collector, Calicut, Dr. K. Gopakumar, DDG (Fisheries), Dr. P. Das DDG (Agricultural Extension) and Dr. M. Devaraj, Director, CMFRI, Cochin.

This multipurpose hatchery complex is well equipped with modern facilities to conduct advance research on broodstock development, larval culture and seed production of commercially important marine fishes, crustaceans and molluscs. Other facilities include conference hall, air conditioned biotechnology lab and instrumentation room and micro algal stock culture laboratory for maintaining pure culture of marine micro algae under aseptic conditions.

IMPORTANT EVENTS

Hindi Week Celebrations

The Hindi Week Celebrations for the year 1998 was organised at CMFRI, Headquarters during the period from 14 to 19 September. Programmes such as observation of Hindi Day, All India Institutional Contest on Rajbhasha Circular, Hindi Correspondence Day, Hindi Science Day, Linguistic Harmony Day and Hindi Mechanical Electronics Aids Day were organised and prizes were distributed to the Winners.

Hindi Workshop

A three day Hindi workshop was organised at CMFRI headquarters for the ministerial staff from 2 to 4 July. Sixteen members attended the workshop.

CMFRI sponsored Official language poster competition

During the joint Hindi week celebrations CMFRI sponsored a programme viz the CMFRI Rajbhasha poster competition. Twenty six entries were recorded from various Central Govt. Offices. Shri. Dr. A. Jayaprakash, Senior Scientist, CMFRI bagged the cash prize for the best poster.

Intensive Pragma course

An intensive Pragma training course was conducted at CMFRI from 12 November - 1 December. Twentysix staff from various Central Government offices at Cochin including 6 staff of CMFRI attended and passed the course.

Fishery Census

A rapid census of fishing fleet was conducted by the survey staff of Tuticorin, and the data is under process.

Consultancy

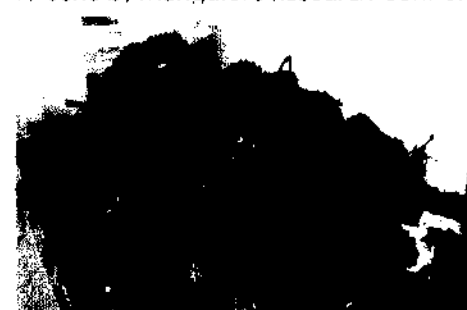
A team of scientists from Tuticorin and Mangalore have attended a consultancy project with the Mangalore Refineries and Petro Chemicals Ltd., Mangalore for inspection of the submarine effluents pipelines of M/s MRPL for a cost of Rs. 80,000/-.

Mussel Harvest Mela



Inauguration of Mussel Harvest by Shri. K. Amarnath Shetty, MLA and Shri. B. H. Anil Kumar, IAS District Commissioner.

A mussel harvest mela was organised on 17 June by Mangalore Research Centre.



A portion of harvested mussel from Mulky Estuary (Dakshina Kannada District, Karnataka)

Model Farmer Award

Sri. Vincent Mukkadan, Johnvilla, Dhalavapuram, Neendakara was selected as the model farmer 1997 of Kollam district by the Kerala State Co-operative Agricultural Rural Development Bank. He adopted the oyster farming technology developed by the CMFRI and was the first to initiate commercial production of edible oyster by farming in Ashtamudi estuary, Kerala. Sri. S. Sarma, Honourable Minister for Electricity and Co-operation presented the award.

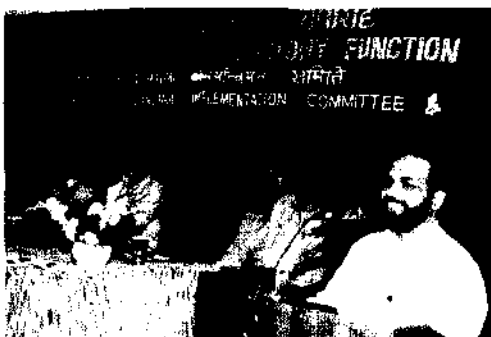


Sri. Vincent Mukkadan receiving the award for the Model Farmer 1997 of Kollam District from Shri. S. Sarma, Honourable Minister for Electricity and Co-operation.

Cochin TOLIC Joint Hindi Week Celebrations

The joint Hindi week celebrations of Cochin Town Official Language implementation committee was conducted at CMFRI from 16-25 November. Various competitions and seminars in Hindi were conducted. Nearly 600 staff from about 100 member organisations participated in the programme.

Shri. V. P. Joy, IAS, District Collector, Ernakulam speaks in the valedictory function of Hindi Week Celebrations



A consultancy project with NEERI, Nagpur for the work on initial environmental examination, Sethu Samudhram Ship Canal Project, was attended by a team of Scientists and technical staff from Cochin, Tuticorin, Mandapam and Calicut. Final report was prepared and

submitted to NEERI.

During the quarter, an offer worth Rs. 1 Lakh from M/S BHEL, Trichy for the inspection of GRP/ HDPE pipelines laid into the sea at Narippaiyur under consultancy basis was received and

finalised.

Under the MoU between CMFRI & M/S Indian Tropical Agro Products Ltd., Tuticorin, regarding on pearl culture, on site training-cum-farming techniques were provided to the firm.

EXTENSION HIGHLIGHTS

Transfer of Technology

An amount of Rs. 10 lakh was sanctioned by the District Administration under the SC/ST plan to promote crab culture, finfish culture and prawn culture among 50 beneficiaries at Panampukad, Chittoor and Elamkunnappuzha, respectively.

Fishermen Meet

The XXXI and XXXII monthly fishermen meets were conducted at Panampukad, on 17 July and 16 October with the focal themes on Crab Farming & Prawn Farming.

A fisherfolk meet was organised at Versova on Versova ke machuaron ki samasyaom per charcha.

An one day seminar on mussel, edible and pearl oyster farming was organised at Ottamassery jointly by CMFRI, Traditional Fishermen Development Society, Ottamassery & Fisheries Forum on 27 June.

Exhibition

Participated in the Adimali Fest '98 organised by the Tourism Department, Idukki from 26-31 December at Adimali and won the Second Prize for the best stall.



A view of the CMFRI Stall at the exhibition at Adimaly Fest '98.

S T A F F N E W S

Deputation abroad

Shri. P.P. Manoj Kumar, Scientist was deputed for the training on Bioproduction and environmental management in semi enclosed sea at Hiroshima University, Japan, 24 March to 13 July.

Dr. M. Devaraj, Director, Dr. V.N. Pillai, Principle Scientist, were deputed to attend the Regional workshop on methods for analysis of fisheries resources under the project on Sustainable management of coastal fish stocks in Asia held in Thailand from 27 October to 4 November.

Dr. E. Vivekanandan, Senior Scientist and MS. Sheela Immanuel, Scientist were also deputed to attend the Regional workshop on fisheries socioeconomics and management under the same project, in Thailand from November 24 to 1 December

Dr. Manpal Sridhar, Scientist (S.S) underwent advanced training and research in probiotics and disease diagnostics under the overseas component of the DBT National Associateship (1996-97) for a period of three months from 8 Aug-8 November. at the Dept. of Biological Sciences, Heriot Watt University Edinburg, UK. She worked on the project entitled "Isolation of putative probionts and their efficacy against *Aeromonas salmonicida* in Rainbow trout (*Oncorhynchus mykiss walbaun*) fingerlings," under Prof. Dr. B. Austin.

DISTINGUISHED GUESTS

Tuticorin

Mrs. Jennifer Chandran, Honourable Minister for Fisheries, Government of Tamil Nadu.

Dr. Usha Desai, Atomic Energy

Regulatory Body, Mumbai, Sri. Hansraj Varma, Director of Fisheries, Tamil Nadu, Shri. S.X. Prince, Asst. Director MPEDA, Cochin, Dr. Tudaa Amarsena Rajapakshe, National Aquatic Resources Agency, Crow Island Colombo, Sri. T.K. Rajendran, IPS, DIG, Tirunelveli.

Dr. N. Bose, Rubber Board, Trivandrum

Dr. Gavin Naylor, IWA, State University, USA.

Shri. K. Sukumaran Pillai, Under Secretary, Law Dept. Trivandrum

Dr. C. Balasundaram, Dept. of Animal Sciences, Trichy.

Kakinada

Dr. S. Rajagopal, Dept. of Aquatic Ecology, University of Nijegen Netherlands.

Dr. Max Troell, Ecologist, International Institute of Ecological Economics, Stockholm.

Mumbai

Shri. Anil Kumar Dube, Director (Hindi) ICAR, New Delhi, 21 December.

ENGAGEMENTS

Dr. M. Devaraj, attended the following:

Management Committee of the Institute at Vizhinjam, 17 July,

Syndicate and Establishment Committee meeting of the Manonmaniam Sundaranar University, Tirunelveli to identify the possibilities of collaboration of the CMFRI with the M.S. University, 11 July.

Meeting of the Environment Committee of Kerala Legislative Assembly, Legislative Complex, Trivandrum to discuss the massive destruction of fishes at Eloor, 14 July.

DPC Meeting of CIFE, Mumbai, 20 July.

Meeting of the Committee of Expert Members convened by the Hon'ble Minister for Fisheries, Kerala, regarding the trawl ban chaired by Dr. N. Balakrishnan Nair at the Ministers Chamber, Trivandrum, 28 July.

Discussion with Fr. Tobias on pearl culture project at Arokyapuram, 27 July.

Discussion with DDG(Fy), ICAR, on matters concerning the RETA programme Management of coastal fish stocks of South East Asian countries and NATP projects of CMFRI, 4 August.

Meeting with Honourable Minister for Fisheries, Govt. of Tamil Nadu regarding the implementation of pearl culture along the Gulf of Mannar coast involving the fisherfolk, 5, and 26 August.

Accompanied the Hon'ble Minister for Fisheries Govt. of Tamil Nadu to identify 5 coastal villages and equal number of beneficiaries/groups between Tiruchendur and Tuticorin for undertaking commercial pearl culture, 8 August.

Visited Iran as a member of the Indian team representing the Govt. of India to study the Marine Fisheries opportunities in Iran for bilateral cooperation.

Senate meeting of the Manonmaniam Sundaranar University Thirunelveli, 12 September.

Attended the second meeting of the

Governing Body of the Fisheries Resource Management Society convened by the Hon'ble Minister for Fisheries, Govt. of Kerala at Government Guest House, Thycaud, Trivandrum, 15 September.

Workshop organised by the Department of Aquatic Biology and Fisheries, Kerala University in connection with the Golden Jubilee Celebrations of Indian independence as well as the Diamond Jubilee of the Kerala University and delivered the Key note address on seafarming technologies for Kerala, 23 September.

Meeting of the Kerala Biodiversity Committee at Govt. Guest House, Thycaud, Trivandrum, 24 September.

Sitting of the Expert Committee on Marine Fisheries Resource Management in Kerala headed by Dr. N. Balakrishnan Nair at C.I.F.T Guest House, Ernakulam, 19 September.

Meeting for considering the requirements under catch-up grant convened by DDG (Education), ICAR, at CIFE, Mumbai, 3 October.

NATP launching ceremony at ICAR, New Delhi, 6 October.

ICAR Director's meeting at National Bureau of plant Genetics Resources Pusa, New Delhi, 7 and 8 October.

Meeting of the Syndicate of Manonmaniam Sundaranar University at the University Building Tirunelveli, 10 October.

Institute's Management Committee meeting at Mandapam Camp., 12 October.

DPC meeting of ISRO as an External Expert Member, at ISRO Satellite Centre, Bangalore, 16 October.

EFC discussions to finalise the IXth plan document pertaining to the four Research Institute's held under the Chairmanship of Deputy Director General (Fy.) at Krishi Bhavan, New Delhi, 3 December.

Inaugural function of Krishi Vigyan Kendra of Indian Institute of Spices Research at Peruvannamuzhi by Padmabhushan Dr. R.S. Paroda, DG, ICAR and Secretary to DARE to Government of India, 7 December.

Workshop on "Sustainable Livelihoods

and Environment Management in the Coastal Ecosystems" organised by M.S. Swaminathan Research Foundation, Chennai and presented a paper on sustainable development and management of capture fisheries, 10 December.

Inaugural function of the First National Seminar on trends in marine biotechnology organised by Manonmaniam Sundaranar University, Tirunelveli and delivered the inaugural address at the Bishop's House, Nagercoil, 14 December.

International Workshops/ Seminars attended

A total of 14 scientists from CMFRI attended the International symposium on large marine ecosystem exploration and exploitation on sustainable development and conservation of fish stocks organised by Fishery Survey of India from 25-27 November at Cochin and presented 10 research papers.

Dr. V.N. Pillai, Head FEM Division attended the National Seminar on Remote Sensing Applications at Anna University, Chennai and presented a paper., 23-25 September.

A team of scientists, from Mumbai Research Centre attended a talk on "evolutions in fisheries jurisdiction and management" by Mr. Satyanandan, Secretary General, International Sea Food Authority of United Nations at CIFE, Mumbai, 17 December.

Smt. P.J. Sheila, Asst. Director (OL) attended a two days Hindi workshop at NAARM, Hyderabad, 28 and 29 December.

Dr. Kuber Vidya Sagar, Senior Scientist attended a seminar at Malvan organised by 'CARE' and presented a talk on "fishery co-operatives".

Shri. S.G. Raju, Scientist (Senior Scale) also attended the above meeting and presented a case study of Versova Fishery Cooperatives. He also participated in the second meeting of the steering committee for the initial Environmental Examination of Sethu Samudharam Ship Canal project held at NEERI, Nagpur, 18-28 June and presented the salient findings of the survey completed by CMFRI.

Shri. D.C.V. Easterson, Senior Scientist served as Chairman of the selection committee for the selection of project Associates held at OPMEC/CECRI, Tuticorin, 29 July. He also gave a lecture on "technology & management of integrated fish farming" at Fisheries College, Tuticorin, 25 July.

Dr. D.B. James, Senior Scientist, delivered a special lecture on marine pollution for the world Environmental Day organised by the Tuticorin Port Trust, 22 June.

Shri. B. Suresh Kumar, Training Assistant (T-4) attended the training programme on techniques on hybrid seed production at IHR, Bangalore, 7-11 September.

Shri. P.R. Leopold, Skipper, Technical Officer (T-9) was deputed as a member of the Indian delegation in the working group of Ecosystem Monitoring and Management (WG-EMM) of the committee for the conservation of Antarctic marine living resources conducted at Cochin from 10-21 August. Participants from different nations attended the programme. The inaugural function was presided over by the Honourable Governor, Justice Sukh Dev Singh Khan. Shri T.K. Ramakrishan Honourable Minister for Fisheries, Govt. of Kerala inaugurated the function.

Training

A training was conducted at Tuticorin on edible oyster culture from 16-25 September.

A training on pearl oyster farming and pearl culture was conducted at Tuticorin from 24 August - 2 September. 22 participants attended the training.

A training on 'seaweed culture' and utilisation was conducted to 10 persons, at Mandapam Regional Centre.

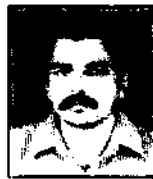
A training course on 'live feed culture' for a period of 5 days was conducted from 24-28 November at Cochin for 12 participants.

A training on 'finfish mariculture' was held at Mandapam for 11 days from 1-11 December for 7 participants.

Degree Awarded

Shri. G. Gopakumar, Senior Scientist at Vizhinjam Research Centre of CMFRI has been awarded Ph.D. degree in Aquatic

Biology and Fisheries for his thesis entitled "Studies on brackish water rotifers of Kerala with special reference to *Brachionus plicatilis* O.F. Muller as live feed for aquaculture."



Smt. K.S. Sobhana, Scientist was awarded Ph. D. Degree by the University of Agricultural Sciences, Bangalore for her studies on The modulator effects of Vitamin C on the disease resistance mechanism of Indian major carps.

Shri. K. Asokakumaran Unnithan, Technical Officer T-9 was awarded Ph.D. Degree by the Cochin University of Science and Technology for the studies on The effect of the pesticides imihua oil cake and croton seed on the prawn culture system.



Appointments

Dr. V.P. Vipin Kumar as Scientist (on probation) at Calicut, 16 December.

Shri. Radhey Sham as Senior Finance & Accounts Officer at Kochi on transfer from ICAR Hqrs., New Delhi, 7 October.

Shri. Sijo Paul as Technical Assistant (T-II-3) at Mahabalipuram, 3 August.

Smt. Jenny B. as Technical Assistant (T-II-3) at Tuticorin, 6 August.

Smt. S. Gomathy as Technical Assistant (T-II-3) at Chennai, 23 September.

Smt. Jeeji, K.S. as SSGr. I (Safaiwala) at Kochi, 3 July.

Shri. A. Paul Pongi as SSGr I (Helper) at Tuticorin, 27 August.

Shri. Sangabhai Lakhbhai Paredi as SSGr. I (Watchman) at veraval, 25 September.

Shri. K.K. Kale as SSGr. i (Watchman) at Mumbai, 7 October.

Shri. S. Karunanidhi as SSGr. I (Helper) at Mandapam Camp, 17 October.

Promotions

Shri. Suryanarayana Murthy, Senior Clerk as Assistant, at Kakinada 31 December.

Smt. P.V. Shanbhang, Senior Clerk as Assistant, 31 December.

Shri. M.R. Wadadekar Senior Clerk as Assistant, 31 December.

Mrs. A.A. Sawant, Junior Clerk as senior Clerk, 31 December.

Shri. P.J. Davis, Supdt. as Asst. Adm. Officer at Mandapam Camp, 22 June.

Shri. S. Balasubramanian, Senior Clerk as Assitant, at Chennai, 10 July.

Shri. P. Krishna Rao, SSGr. III (Messenger) as Junior Clerk at Kochi 3 August.

Shri. V. Demudu, SSGr. III (watchman) as Junior Clerk at Kochi 3 August.

Shri. R.V.S. Subramanyam SSGr. III(Messenger) as Junior Clerk at Kochi 3 August.

Shri. Palaniappan, SSGr. I (Safaiwala) as SSGr. II (Safaiwala) at Calicut, 18 March.

Shri. H.M. Bhint, SSGr. II (Messenger) as SSGr. III (Messenger) at Veraval, 18 March.

Smt. S. Anjalidevi, SSGr. I (Peon) as SSGr. II (Peon) at Chennai, 22 October.

Shri. S.M. Sikkender Patcha, SSGr. I (Fieldmen) as SSGr. II (Fieldman) at Mandapam Camp, 21 October.

Shri. T. Thananjeyan, SSGr. I (Fieldman) as SSGr. II (Fieldman) at Mandapam Camp, 21 October.

Shri. V.H. Venu, SSGr. I (Binder) as SSGr. II (Binder) at Kochi, 16 October.

Shri. V. Krishnan, SSGr. I (Messenger) as SSGr. II (Messenger) at Kochi, 16 October.

Shri. S. Alagesan, SSGr. I (Fieldman) as SSGr. II (Fieldman) at Tuticorin, 27 October.

Shri. M. Shanmughavelu, SSGr. I (Messenger) as SSGr. II (Messenger) at Mandapam Camp, 9 November.

Shri. N.V. Thambi, SSGr. I (Lab. Attendant) as SSGr. II (Lab. Attendant) at Kochi, 8 December.

The following Superintendants were promoted as Assistant Administrative Officers.

1. Smt. T.K. Ponnamma, at Kochi, 28 December.
2. Shri. B. Vijayakumar, at KVK, Narakkal, 28 December.
3. Shri. C. Balamamundinathan, at Kochi, 28 December.
4. Shri. A. Narayanaswamy, at Kochi, 28 December
5. Shri. K. Nagarajan, at Mandapam Camp, 30 December.
6. Smt. D. Geetha, at TTC, Kochi, 28 December.
7. Shri. K.M. Karuppiah, at Chennai, 29 December.
8. Miss. M.A. Seetha, Sr. Stenographer as Senior P.A. at Kochi, 28 December.

The following Senior Clerks were promoted as Assistants

1. Shri.M.K. Abdulla,)
2. Shri. A.P. Balakrishnan) at Cochin, 28 December.
3. Smt. P.K. Sreedevi)
4. Smt. K. Parvathy) at Chennai
5. Smt. G. Abitha) 29 December
6. Smt. P.V. Shanbhag)
7. Shri. M.R. Wadadekar) at Mumbai 31 December
8. Shri. S. Suryanarayana Murthy) at Kakinada)

The following Junior Clerks were promoted as Senior Clerks

1. Shri. N.K. Mohanan)
2. Smt. G. Ambika)
3. Smt. N.K. Suseela)
4. Shri. K. Baburaj)
5. Smt. M.G. Chandramathy)
6. Shri. V.C. Subash)
7. Smt. K.K. Kousallia) at Kochi,
8. Shri. V.C. Antony) 28 December
9. Smt. V. Jayalekshmi)
10. Shri. K.J. Mathew)
11. Shri. C.K. Sivasdas)
12. Smt. P.K. Mary)
13. Shri. K. Ramadasan)
14. Smt. N.M. Ponnamma)
15. Smt. A.B. Lalitha) at Chennai)
16. Ms. P. Thankaleela) at Chennai) 29 December
17. Shri. M.J. Tomy Prince) at Narakkal)
18. Smt. M. Rameswari) at Mandapam)
19. C. Rajeswari) at Tuticorin)
20. Shri. R. Srinivasan) at Calicut)
21. Shri. M. Samuthiram) at Tuticorin)
22. Smt. K. Balamani) at Calicut) 30 December
23. Smt. K.P. Shylaja) at Calicut)
24. P.Subhadra) at Calicut)
25. Shri. K.M. Abdulla) at Mangalore)
26. K. Balaraman) at Calicut)
27. Smt. Ashlesha Ashok Sawant) at Mumbai)
28. Shri. D. Augustus Julin Raj) at Cochin) 31 December
29. Smt. K.N. Meera) at Cochin)

Transfer

Shri. Wilson T. Mathew, Scientist from Kochi to Chennai, 17 September.

Shri. A. Udayakumar, Junior Technical Assistant (T-2) from Kochi to Vizhinjam, 2 September.

Shri. P. Ganesan, Superintendent from Mandapam Camp to Visakhapatnam, August.

Shri. S. Natarajan, Tech. Officer (T-9) from Tuticorin to Chennai.

Inter Institutional Transfer

Dr. George. J.P as Senior Scientist at Kochi on Inter Institutional transfer from CIFE, Mumbai, 9 July.

Dr. S.K. Chakraborty, Senior Scientist at Mumbai on Inter Institutional transfer to CIFE, Mumbai, 31 August.

Shri. Om Prakash Joshi, Hindi Translator T-II-3 at Veraval on inter institutional transfer to ICAR headquarters, Kochi, 9 October.

Shri. C. Purandara, Junior Technical Assistant (T-2) at Mangalore on Inter Institutional Transfer to CPCRI Kasargod, 31 December.

Shri. R. Kumaran as SSGr. I (Peon) at Chennai on Inter Institutional transfer from CPCRI Kasargod, 3 August.

Relief

Shri. P.K. Mahadevan Pillai, Tech. Officer

(T-7) at Kochi on Superannuation, 30 November.

Shri. K.L.K. Kesavan (T-5) at Kochi on Superannuation, 30 June.

Shri. C.V. Seshagiri Rao, Technical Officer (T-5) at Visakhapatnam on Superannuation, 30 June

Shri. Mohideen Meerasa, Deckand Senior (T-I-3) at Mandapam on Superannuation, 30 June.

Shri. V. Alagan, SSGr. II (Watchman) at Mandapam Camp on Superannuation, 31 July.

Shri. V. Santhanam, SSGr. III (LA) at Mandapam Camp on Superannuation, 31 August.

Shri. G. Saivadurai, SSGr. III (Watchman) at Mandapam Camp on superannuation, 30 November.

Voluntary Retirement

Shri. S. Mangalam, Assistant at Chennai on voluntary retirement, 1 July.

Shri. K. Shahul Hameed, Technical Assistant (T-I-3) at Chennai on voluntary retirement, 1 August.

Shri. K. Shanti Prasad, Senior Clerk at Visakhapatnam on voluntary retirement, 1 November.

Shri. R.D. Pednekar, SSGr II (Peon) at Karwar on voluntary retirement, 1 October.

Invalid pension

Shri. B.K. Velukutty, SSGr.II (Messenger) at Vizhinjam on invalid pension, 28 October.

Resignation

Dr. Mohan K. Zachariah, Scientist at Mandapam Camp resigned, 15 July.

Dr. P.V. Omana, Hindi Translator (T-II-3) at Mandapam Camp resigned, 30 June.

Shri. K. Kosalram, SSGr. I (Watchman) at Tuticorin, resigned, 31 July.

Marriage

Shri. M.P. Paulton, Technical Assistant (T-II-3) married Kumari Jainy at Koratti, 30 August.

Obituary

Dr. Pon Siraimetan, Senior Scientist at Tuticorin, 17 July.

Shri. G. Vijaya Warriar, Technical Officer (T-5) at Vizhinjam, 23 July.

Shri. Y.H. Gamanagatti, Senior Clerk at Karwar, 26 August.