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CENTRAL MARINE FISHERIES RESEARCH INSTITUTE — A RETROSPECTION

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On being invited to contribute an article for the Souvenir to be issued in connection with the formal opening of the new building at Cochin to house permanently the headquarters of the Central Marine Fisheries Research Institute, my thoughts go back to 1944 when Dr. Baini Prashad, the first Fishery Development Adviser to the Government of India, was initiating steps for the establishment of a fishery research Institute in the country and enquired of me if I could serve as one of the heads of divisions in the proposed institute. In the course of the next two to three years the original concept of a single Institute for fisheries research for the whole country had to undergo change in favour of two, one for marine fisheries and the other for the inland (freshwater and brackishwater) fisheries, apart from one for fisheries technology. As the only individual surviving who had occasion to serve in senior positions in both the Institutes in their formative years and as one who was responsible for the shifting of the headquarters of the Central Marine Fisheries Research Institute from Mandapam Camp to Cochin, it is felt that information on its historical background will be more appropriate than a narration of its achievements and programme of work as it is presumed that these aspects would be adequately dealt with elsewhere by others in the Souvenir.

The pre-independent Government of India evinced no direct interest in the fisheries of the country which remained a deferred subject until the forties of this century except for the enactment of the Indian Fisheries Act of 1897. Before the integration that took place after Independence, India was a conglomeration of territories under the overall suzerainty of Britain, divided mainly into British India and Native States with their own systems of rules and regulations regarding fisheries, which were essentially revenue oriented. What little work was done on fishes in general in the country till the close of the 19th century was confined mainly to the observations recorded by some of the officers of the erstwhile East India Company, beginning with Russel and Francis Buchanan (Hamilton Buchanan) and followed by several others. In the mean-

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while, collections of fishes from India and adjacent countries made by those interested in natural history belonging to the colonial powers which were over-running the region were described and deposited by ichthyologists in the various museums in Britain and the continent. The latter half of the 19th century saw the emergence of Francis Day, a veterinary surgeon in the British Army stationed in South India, who subsequently rose to the position of the Inspector-General of Fisheries in India and Burma. His contributions on Indian fishes and fisheries yet remain unparalleled and his monumental publication entitled the "Fishes of India" still holds the field as the major work of reference on fishes of the Indian Region even after the lapse of over a century.

Towards the close of the 19th century and the beginning of the 20th century, studies on fishes and other aquatic fauna were carried out by the officers of the Marine Survey of India and the Zoological Survey of India and by research scholars in some of the universities. The credit for highlighting the need for organised work on fisheries and for the establishment of full-fledged fisheries departments in the major provinces and states was stressed by Sir Frederick Nicholson, an Indianised Britisher in the Civil Service, who will ever be remembered as the father of fisheries in India. His frank and forthright views that India should look to Japan and not to Britain for the development of fisheries gave vent to scathing criticism against him by the Anglophiles of those days which he withstood with courage of conviction and organised the fisheries department in Madras, the first of its kind in India. However, fisheries continued to remain as a deferred subject which served as severe constraint for its development.

The recommendations of the Report of the Industrial Commission of 1916-1918 stipulated that the Central Government should promote studies on fisheries by strengthening the scientific staff of the Zoological Survey of India. About quarter of a century passed with hardly any change in the situation, the great economic depression of the late twenties and the thirties imposing severe constraints on the expansion of any research activities.

An idea of the state of our knowledge on Indian fishes till the late thirties could be had from the following statement of Dr. Stanley Kemp, a former Director of the Zoological Survey of India and the then Director of the Marine Biological Laboratory at Plymouth, in the course of an address at Cambridge to the Zoological Section (D) of the British Association for the Advancement of Science. "It is no exaggeration to say that in Africa and almost throughout the stretch of the Indo-Pacific region, there is scracely a fish whose life history is fully known and whose various stages from egg to adult can be recognised. Of such matters as age, rate of growth, spawning periods, food and migration, we are equally ignorant, nothing is known of the incidence of fluctuations and nothing in seasonal and other changes in the environment." In

fact by then the picture had begun to change owing to the investigations initiated by several Indian scientists, particularly belonging to the University Zoological Laboratory at Madras and the Madras Fisheries Department.

The entry of Japan as an ally of the then fascist powers brought South East Asia within the orbit of the war zone and India, on account of its vital position and vast man power, became the main base for the Allied Forces in this region. This brought in its wake the problem of supply of adequate quantities of fish, particularly for the very large number of army personnel, and this served as a pointer to those in power to the woefully backward organisational set up of the fisheries in the country. The British Administration poignantly began to realise the absence of a central co-ordinating authority regarding fisheries in general in the country and in 1943 Dr. Baini Prashad, who was then Director of the Zoological Survey of India, in his historical Memorandum entitled "Post-war Development of Indian Fisheries" rightly stated that he is "definitely of the opinion that it would be best if a central Research Department of Fisheries of the Government of India is constituted instead of tagging it on to the Zoological Survey of India and that "it would not be in the best interest of fishery research in India to make it a subsidiary of the activities of the Zoological Survey of India." In the opening paragraph he stated as follows:

"I recommend that a Central Fishery Research Institute be established by the Government of India on lines similar to those of the Agricultural Research Institute at New Delhi, the Veterinary Research Institute at Mukteswar and Izatnagar, and the Forest Research Institute at Dehra Dun. Agriculture including veterinary work, and forestry are, like fisheries, transferred subjects; but the Government of India are maintaining fully equipped and well staffed research institutes for the study of problems connected with these subjects, and there seems to be no reason why the development of Indian fisheries, which in their importance are second only to agricultuture and animal husbandry, should not be taken up along similar lines".

The above recommendation helped to pave the way for considering favourably the establishment of a Central Fisheries Research Institute and this was endorsed among other aspects of fishery development in the country in the "Report of the Fish Sub Committee of Policy Committee No. 5 on Agriculture, Forestry and Fisheries" dated 18th January 1945 prepared by Dr. Baini Prashad in his capacity as its Member-Secretary who by 1944 had become the Fishery Development Adviser to the Government of India, thereby bringing fisheries within the orbit of concurrent subjects. To begin with, grants were provided for some projects to a few states through the ICAR. For making specific recommendations regarding the establishment of the proposed Central Marine Fisheries Research Institute Lt. Col. Dr. Seymour Sewell who was formerly Surgeon Naturalist to the Marine Survey of India and Director of the Zoological Survey

was invited to India in 1946.* We have to bear in mind that India was undivided then and regarding Marine fisheries research the entire coastal area from the Makran Coast of Baluchistan in the west to Chittagong Coast in Bengal in the east had to be considered. He made visists to most of the potential centres considered suitable for the different types of fisheries research establishments contemplated then and gave his recommendation in his "Memorandum on the Proposed Fisheries Research Institute" (1946). Herein on page 4 under "The organisation of the proposed Central Fishery Research Institute" he stated as follows:

"The work of such an Institute will be of primary importance in the whole of India including all the various Provinces and States. While a number of problems and the research necessary for their elucidation will be common to the whole country, others will be purely local; hence any organisation for Research and for the scientific development of the fisheries must be so designed as to cover not only all the various Divisions of the country but also the various kinds of Fisheries that are carried out, namely:—

Marine Fisheries

Estuarine Fisheries, and

Fresh Water Fisheries

and two of these three main branches are still further sub-divided into Sections. Thus we have

Marine Fisheries

- a. In-shore Fisheries
- b. Off-shore and deep-water fisheries

Estuarine Fisheries

Fresh Water Fisheries

- a. Pond, tank and lake fisheries
- b. River Fisheries

Since there are no political boundaries to these different branches, the direction and co-ordination of Fishery Research must be carried out by the Central Government though these problems that are of purely local importance and interest should be studied by the Fishery Department of the Provincial or State Governments that may be concerned".

^{*} I recall the visit of Dr. Seymour Sewell, who was 68 years old then, to Mandapam in 1946 accompanied by Dr. Baini Prashad. They were received by the officers of the Madras State Fisheries Dept and all of us visited in a Royal Indian Navy boat the Marine Biological Station in Krusadi Island and subsequently the abandoned Naval Hospital buildings at Mandapam.

The marine fisheries research set up envisaged by Dr. Seymour Sewell in his Memorandum was for the whole of undivided India. Regarding the essential requirements for the location of a marine fisheries research station, he stated as follows:

- "1. That it shall be in a place that is easy of access; as Prof. A. V. Hill F.R.S. has pointed out, "A Central station should be established at a place where large numbers of people could be attracted and where it would create a public interest. The staff of the Zoology Departments of Universities and lecturers and research workers should come to work at the station.
- 2. It should be at or near an important fishing port, on which a fishing fleet is based and where large catches can be landed. In this connection, as the use of power craft for fishing increases, these craft will, of necessity, have to be based on a relatively few home ports, where all engineering facilities and supplies of fuel and oil etc. are readily available.
- 3. It must have good harbour facilities, with workshops, slip-ways, dry docks etc.
- 4. It should be reasonably near to good fishing grounds; other requirements are
- 5. A good fresh water supply
- 6. Supply of electricity for power and light
- 7. Suitable land for building
- 8. Good road and rail communication
- 9. Good cold-storage and refrigeration facilities, ice-factories etc".

He pointed out that although about 75% of the Marine fish catches are from the West Coast, "with the further development of power driven crafts it is quite possible that very valuable and extensive fisheries will be developed on the East Coast also". He recommended Karachi for the West Coast and Mandapam for the East Coast. Adjacent to the Quarantine camp established by the Ceylon Government at Mandapam, was a huge sprawling Naval Hospital Complex in an area of about 90 acres which was lying in an abandoned condition overgrown with thorny jungles and this was to be acquired to accommodate the proposed marine fishery research institute for the East Coast section of the country.

Pending renovation and reconstruction to make the place habitable, the Central Marine Fisheries Research Station* started functioning in the Zoology

^{* &}quot;Station" changed to "Institute" and "Chief Research Officer" into Director subsequently.

Laboratory of the Madras University from February 3, 1947, with Dr. H. Srinivasa Rao, formerly of the Zoological Survey of India and till then Deputy Fishery Development Adviser, Government of India as the Chief Research Officer. During the same year the country passed through the trauma of partition bringing in its wake several problems which were resolved by our leaders. It took about two years for renovations and reconstructions to make the buildings at Mandapam Camp habitable and they were occupied in 1949. The research activities of the Institute began to increase and correspondingly a number of substations and research centres were established in places of fisheries importance. Gradually living facilities also began to improve as at the beginning only rail connection existed between Ramanathapuram, the nearest town with banking and marketing facilities, and Mandapam Camp, a distance of about 35 km. Towards the end of 1950, Dr. Rao retired and was succeeded by Dr. N. K. Panikkar. An area of over 100 acres consisting mainly of sandy lagoon lying on the Palk Bay side was added to the Research Station for conversion into a fish farm. Steps were initiated by the mid-fifties for the construction of permanent quarters for the staff. My advent to the Central Marine Fisheries Research Station was in early 1954 as head of the Fishery Biology Division, after seven years as head of the Estuarine Biology Division of the Central Inland Fisheries Research Station, the overall charge of which I had held for nearly a year.

Seven years of fisheries research appeared to have made every one involved in it wiser than ever before. Most of the scientific members of the staff were in their twenties and thirties, a few of the oldest being in their forties. Practical experience had given them a good picture of the distribution pattern of the major marine fisheries in the country and the rather pitiful unsuitability of Mandapam Camp to serve as headquarters of the Research Institute. Except for a few of the local staff, there was hardly any one who had any inclination to live in this place for any length of time. This was realised by every one from the lowest to the highest in the Institute but nobody had the courage to voice the truth openly. Those who could manage to get out of the place did so quietly one by one. Some of the luckier ones who continued in the Institute had opportunities to get themselves posted in its substations and centres where living facilities were better. The major handicaps were the lack of schooling, medical and marketing facilities apart from a sense of perpetual isolation from the so-called "civilized society". Even the Marine Biological Station of the State Fisheries Department in Krusadai, considered as a "paradise" for marine biologists and a place of "pilgrimage" for college students from all over India, was suffering for long from the same fate as it could hardly attract any experienced scientists to remain in charge of it for any appreciable length of time. One could see the silent sense of frustration writ large on most of the staff. In the meanwhile permanent quarters were being built which instead of giving to the scientific staff relief, created only despair and depression under the feeling that they are condemend to live there for the rest of their official career. Most of them were resigned to their fate and any thought or mention of change of the headquarters from Mandapam Camp was considered a sacrilege.

It was under those circumstances that I took charge in 1957 from Dr. Panikkar as head of the institution. Thanks to the co-operation of my colleagues and the research scholars working under me it was possible to maintain the steady growth of the Institute into one of the foremost of its kind in South East Asia. The tempo of scientific activities was maintained at a high level by organising field trips and cruises and founding the Marine Biological Association of India and holding international symposia and bringing out a journal and other publications under its auspices. The Institute was recognised as a centre for research by quite a large number of universities in India and served as a base for scientists from various parts of the world during the International Indian Ocean Expedition in the early sixties. Several scientists from within this country and outside used to come and spend short periods for research. Investigations were carried out by research scholars supported by the University Grants Commission in marine biological subjects including fish and fisheries. This hepled to produce several specialists who are now foremost in their respective fields in the world.

However it was evident that if the Institute had to grow and fulfil its purpose, the headquarters should be shifted to a more suitable place. Strangely, efforts made to acquire a plot of land for years either in Madras or Tuticorin in the hope that the same could be developed and strengthened did not meet with success. It almost looked as if some were intent on pinning down the headquarters of the Institute to its existing place for ever though none of them could ever think of staying in such a place for any length of time. In the meanwhile, subtle attempts made in certain quarters, to have it eventually shifted to Bombay by stationing initially all the senior officers there, were effectively thwarted by speedily posting them to Cochin which by that time had grown into the most important centre for fisheries activities in the entire Indian Region. In 1967, the Estimates Committee of the Parliament visited the Institute at Mandapam Camp and it was possible to present before them very forcibly the need for shifting the headquarters of the Institute to a better place, so that it could work with better efficiency and grow to its fullness. It goes to the eternal credit of the elected representatives of our people that they were convinced of the justification for the same and recommended the move in unequivocal terms. By 1967, the transfer of the Institute from the Ministry of Food and Agriculture to the Indian Council of Agricultural Research took place and it was rightly decided subsequently that my successor should take over charge as Director at Cochin. Fortunately attempt made in some quarters to thwart the same turned futile and it is best that those sordid events are forgotten. In 1970, I was succeeded by Dr. S. Z. Qasim who in turn was succeeded by Dr. E. G. Silas

in 1975 followed by Dr. P. S. B. R. James in 1985, all scientists of a very high order, the last a product of the Institute itself.

Retrospectively speaking at the fag end of my life, I feel happy at the steady growth that the Institute had been maintaining from its very inception and take the liberty of expressing my satisfaction at the significant role that I had the privilege of playing in it for a period of over 16 years. For me the completion of the new building for the headquarters of the Institute is like a dream coming through. It is now on the threshold of a new era in its history and it is my earnest hope and wish that it would continue to blaze its trail as the premier institution of its kind in the entire Indian Ocean region. My good wishes and blessings go with it.