

**FISHES OF THE
LACCADIVE ARCHIPELAGO**

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By

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DEDICATED

to the late **Dr. BAINI PRASHAD,**

the first Fisheries Development Adviser to the Government of India
and formerly Director of the Zoological Survey of India
due to whose vision, initiative and indefatigable efforts
the foundation for fisheries research and development
under the Central Government was laid in this country,

and

to the **PEOPLE OF LAKSHADWEEP (Laccadives),**

in grateful remembrance of the cordial welcome
and co-operation extended by them
during our visits.

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PREFACE

The preface is written by only the senior author in order to deal adequately with the background of this work and also to record the important role played by the co-author in the preparation of this publication. In doing so, a personal touch by him is unavoidable considering the circumstances under which the work has been initiated and completed, and hence he seeks the indulgence of the readers in this regard.

What little I had heard during my boyhood days about the Laccadives or the 'Lakshadweep',* as they are known in Malayalam, meaning a hundred thousand islands, and the people thereof fascinated me a great deal. Born and brought up in the heights overlooking the famous Kovalam beach on the Arabian Sea near Trivandrum in Kerala, I had imagined as a boy that most of the sailing ships, if not all, that appeared in the horizon were from those far off islands. The idea of a visit to the Laccadives was almost like a dream then. Subsequently during my holiday visits to Ceylon (Sri Lanka) in the early thirties, I had occasion to see in the Colombo Harbour the graceful sailing vessels or "buggalows" as they were called, from the Maldives and the sleek "odams" from the island of Minicoy in the Laccadives, and this kindled in me the desire to visit those islands about which I had read by that time in the book entitled "A Naturalist in Indian Seas" by Alcock and in "The Fauna and Geography of the Maldivian and Laccadive Archipelagoes" by Stanley Gardiner. In 1937, while engaged in research for a short time in the Marine Biologist's Laboratory in the Colombo Museum, I made preparations for a visit to the Maldives, which however did not materialise as I had to return to India suddenly. With the passage of time and with the rapid political changes that were taking place in the countries of the Indian region soon after the Second World War, chances of visiting the Maldives had become very remote. However, early in 1954, when confronted with the unexpected transfer from the Central Inland Fisheries Research Institute to the Central Marine Fisheries Research Institute, I welcomed the same without demur, since apart from the lure of the sea and the animal life therein, the dormant desire to visit the Laccadives and carry out investigations on the fish and fisheries there was rekindled. In fact, the work began to get planned during the train journey from Calcutta to Calicut. On going through the then existing literature it was found that since the pioneering days of Alcock towards the close of the last century on board the *INVESTIGATOR* and the contributions by the Cambridge Expedition (1899-1900) under the leadership of Stanley Gardiner, what little was known of the fish and fisheries of the Laccadives was confined to the stray observations made during the periodic inspection visits by the officers of the then Madras Fisheries

* These islands are now officially named Lakshadweep by the Government of India.

Department in the first quarter of this century. Surprisingly, the importance of the Laccadive Sea as a potential fishing ground for tunas and related fishes remained unknown and unrecognised and the Central Marine Fisheries Research Institute did *not* have till then in its collections a single fish or any other type of marine specimen from there. The islands had remained unvisited by any person from the Institute. For some reason or other, the Zoological Survey of India also had not made any attempt for a study of this area.

In spite of the various practical difficulties, it was decided to make a comprehensive study of the fishes and the fishery resources there. Since it was not possible for myself to undertake any visit at the time, I arranged to send in 1954 Mr. V. Balan, a young colleague of mine, on a reconnaissance survey and he returned after a successful visit to some of the islands. Containers with formalin for preservation of specimens were sent periodically to the medical officers stationed in the various islands along with consignments of sweets for distribution among children to serve as an inducement for them for collecting fish. A significant step forward in the programme came with the advent of Mr. M. Kumaran, the co-author of this book. His joining me in December 1955 paved the way for a decade and a half of productive partnership in research, culminating in the preparation of this book for publication. He was sent to Minicoy in 1956 for making fish collections and for a preliminary survey of the tuna fishery there. With myself taking up charge as the head of the Central Marine Fisheries Research Institute in 1957, the studies initiated on the fishes of the Laccadive Archipelago received a new impetus and orientation. An area which had till then remained outside the orbit of fisheries survey and research was covered for the first time. In 1958 and 1959 I was able to participate in the cruises of *R. V. KALAVA* in the Laccadive Sea which enabled me to visit all the inhabited islands and make extensive collections personally. I had the opportunity to revisit Minicoy and some of the other islands in 1962 in *R. V. VARUNA*. Mr. Kumaran also accompanied me during the first cruise in 1958 and he revisited many of the islands subsequently for collection purposes. In the meanwhile, a Research Centre under the Central Marine Fisheries Research Institute was established in Minicoy in 1958 and with this it was possible to augment the collections appreciably.

The preliminary investigations carried out on the fishery resources of the area revealed the potentialities for the development of the oceanic fisheries there, comprising mostly of tunas and bill fishes, the significance of which had remained unknown and unappreciated till then. Therefore, with a view to highlighting the oceanic fishery resources of the seas around India, and particularly of the Laccadive Sea, a Symposium on Scombroid Fishes was organised early in 1962 under the auspices of the Marine Biological Association of India which was founded by me. The proceedings of the same and the developments that have taken place since then amply show the successful achievement of

the objectives of the Symposium though we are yet to take full advantage of the potential resources.

Heavy official responsibilities imposed considerable limitations on the time I could devote to this work. Viewing retrospectively, it is a matter of great satisfaction that this work which was initiated by me as a labour of love has materialised in the form of the present publication despite various hurdles, most of which will remain an *untold story*, perhaps typical of the ordeals that many persons engaged in scientific research have to face in this country. It may be stated in this connection that though I have been responsible for the planning, initiation and effective operation of the project, its steady progress and completion in the present form would *not* have been possible but for the sustained and unmitigated efforts of Mr. M. Kumaran, the co-author of this book, who has been responsible for the critical examination of the specimens and preparation of the descriptions. It is therefore with great pleasure that I wish to place on record my high appreciation and tribute for the very significant role he had played in the completion of this work in spite of the ordeals he too had to undergo in the execution of the same. The after effects of a polio attack that I was subjected to in 1964 confined me to the wheel-chair and staggered the progress of the work considerably, attenuating the prospects of completion of the same. It was decided then to publish at least the new records and these have appeared in a series in the *Journal of the Marine Biological Association of India* from 1964 to 1970. However, the completion of the major work has materialised mainly owing to the devotion and perseverance shown by the co-author who sacrificed all his spare time for the purpose. In view of an assignment he had to take up outside the Central Marine Fisheries Research Institute in 1967 as Fisheries Development Officer in Andaman and Nicobar Islands for a couple of years, the work had to be hastened to some extent during the later stages.

Quite a large number of persons have assisted the authors in this work especially in making collections and in the preparation of the diagrams. The greater part of the material collected was by persons belonging to the Laccadives who were serving in the Central Marine Fisheries Research Institute. The names of Dr. Shaik Koya Thangal, now a medical officer in one of the islands and Mr. P. Mohamed Sayeed, now the Member of Parliament representing Lakshadweep and for some time a Minister of State in the Union Cabinet deserve special mention. During the short periods they served in the C.M.F.R. Institute as Field Investigators before their graduation, they made collections of fishes as desired by me from various islands in the Archipelago and I wish to record my sincere thanks to them. Subsequently, Mr. Kunhi Koya of Kalpeni succeeded them. Mr. Ali Manikfan hailing from the island of Minicoy in the Laccadives made the most extensive collections and I wish to express my thanks to him. He ascertained the local names of fishes and assisted us in various ways in the laboratory also and I wish to record my high appreciation for his rare intelligence, versatile talents and most capable assistance.

I am grateful to the former Indo-Norwegian Project authorities for the opportunity afforded for undertaking cruises in the Laccadive Sea on board the Research Vessels *KALAVA* and *VARUNA* which enabled me to visit the islands to make collections and personally study the conditions there. In special, I wish to record here my high appreciation and gratitude to Prof. G. M. Gerhardsen during whose directorship of the Project in 1957-58, co-operative oceanographic investigations by the Central Marine Fisheries Research Institute were initiated leading to the beginning of a most fruitful and outstanding era of oceanographic work in this country. My thanks are due to a number of Norwegian and Indian personnel who were on board the above vessels for all the courtesy and co-operation extended by them.

Most of the diagrams in this book have been executed by Mr. K. L. K. Kesavan and Mr. A. Muniandhi of the Central Marine Fisheries Research Institute and the remarkable degree of skill and care with which they have done the same deserve high compliment. They were selected and trained by me for the purpose from among the many who were engaged on a daily waged basis and it is a matter of great satisfaction to me that they reached the highest level of proficiency in their work. I wish to express here my sincere thanks and appreciation to them.

I take this opportunity to record my gratitude to the late Dr. Bains Prashad who as the founder of fisheries research and development under the Central Government in this country invited me to take up fisheries research in a senior position which indirectly led to the initiation of this work. The dedication of this book to him, therefore, is only a small tribute to that outstanding personality who was an intellectual giant, a versatile genius and a colossus among zoologists of this century, the like of whom our country is yet to produce another. My sincere thanks are due to the people of the Laccadive Islands whose courtesy, hospitality and friendliness I can never forget. The co-operation and assistance extended by them to myself and my colleagues in spite of their own problems for existence have greatly facilitated the collection of the material described in this book and it is therefore a great pleasure to dedicate it to them also.

To me, the publication of this book is the materialisation of a long cherished desire. I am conscious of the fact that it might be found imperfect in some respects, but I have no arguments to put forward in defence of the same except that this is all what possibly could be done. I take the full responsibility for all the shortcomings. Nevertheless, it will be a matter of gratification for me if the contents of this book would help to stimulate others to go in for a better and more comprehensive study of the ichthyofauna of this interesting area. With this fervent hope this book is placed before interested readers.

S. JONES