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Madras Fisheries Department.

THE rising wave of prosperity after the worst depression of 1931-32 is recorded in the Director's Administration Report of the Madras Fisheries Department for the year 1935-36, wherein he notes that the year witnessed the revival of important activities which had been suspended. It is indeed a matter of great satisfaction that the Department will now be in a position to demonstrate to the local fishermen the suitable type of craft and tackle to exploit the off-shore fishing grounds, some of which had been discovered by the trawler "*Lady Goschen*" as long ago as 1931. For this experiment a Yorkshire Motor Coble will be used under the direction of Mr. Ritchie as the Master Fisherman in charge. Trials will also be made with the drift, Danish Seine, and American Purse or Ring nets, and their relative utility under Indian conditions assessed. The results of these experiments will be watched with the greatest interest, not only by Madras but also by all other provinces which possess a coast line.

The proposed improvement in the Marine Aquarium at Madras will also give satisfaction to all lovers of nature, and also to those who appreciate the value of such public places as institutions of education in the real sense of the word.

We share the regret of the Director that the value of contributions that Fisheries can make as a source of food supply and wealth to the economic life of the country is not yet realised by the Government of any province. On several occasions we have urged the desirability of creating a Central Bureau of Fisheries Research for the proper conservation and scientific exploitation of the fisheries resources of the country, but no attention seems to have been paid to this problem so far, though an investigation into the whole question of Indian fisheries was promised in one of the meetings of the Advisory Board of the Imperial Council of Agricultural Research, a number of years ago.

A very creditable record of the biological research carried out by the Department is contained in the Report. The presence of animal growth ring in Mackerel scales is now definitely confirmed and it will now enable the assessment of the age of the fish in different catches. Though such investigations are common in Western countries, probably it is for the first time that in an Indian fish an annual growth ring has been definitely demonstrated. The continued research on Oil-Sardine has yielded valuable results which shall have great bearing in forecasting the Fishery of this commercial

species in future years. Here again, the results obtained are comparable to those already known in the case of Herring Fisheries of the Norwegian waters. By far the most creditable piece of research accomplished is to trace the life-history of the most valuable anadromous fish of India, the well-known *Hilsa* of Bengal and the *Palla* of Sind. These researches will no doubt enable in years to come the propagation of the species artificially as is being done in the case of the American Shad.

Through technological research considerable advances have been made in the methods of fish-curing and preservation; in increasing the manurial value of seaweed compositions and in devising means of wood preservation.

Other research items include plankton investigation, fish-marking experiments, hydrographical investigations, pearl fisheries, research on *Gourami*, *Catla*, *Chanos*, and *Etroplus*, etc., etc.

Attention is also directed in the Report to such activities as the supply of Biological Specimens, Anti-Malaria Work, Socio-Econo-

mic Work, Propaganda, Fishery Legislation and Publications of the Department. Among publications are mentioned Fish Statistics, Fishing Methods on the Malabar Coast, Bulletin on Pearl Fisheries, Bulletin on Marketable Fish, Trawlers' Report and a report on the brackish water perch *Therapon jarbua*.

In Part II of the Report reference is made to the sound financial stability of the Department which showed a surplus of one lakh of rupees of income over expenditure. In the final part, the Director deals with the Staff and equipment of the Department.

On the whole, the Report, as in the previous years, marks a distinct advance in the development of fisheries in the Presidency of Madras and for this achievement great credit is due to Dr. B. Sundara Raj, the Head of the Department. The working of the Department under great limitations and severe handicaps has demonstrated all the same that fisheries can pay well in this country provided they are properly organised and have a scientific staff to direct and guide the working of the fisheries.

Indian Fisheries.

THE developement of the fishery resources of India is of the greatest importance for the improvement of the health of its teeming millions. In our recent article on 'Indian Fisheries and Japanese Enterprise' (May 1937, 5, 573-77) attention was directed to the present unhappy state of affairs and suggestions were made for its improvement. Our readers will be glad to note that *Nature* in its issue of August 14, 1937, made favourable comments on our editorial and added further details to indicate the gravity of the situation. Our Calcutta contemporary *Science and Culture* also published an article from Lt.-Col. R. B. S. Sewell, F.R.S., on "Sea-Fisheries in Indian

Waters" in its issue of October 1937. Finding a certain amount of awakening of public interest in this matter, we requested Rai Bahadur Dr. S. L. Hora to obtain for us the views of persons who have had first-hand knowledge of Indian fishery conditions and we are glad to publish elsewhere in this issue an article from the pen of Dr. A. W. Herre, formerly chief of the Bureau of Fisheries, Manilla, Philippines. We hope to publish further articles as they become available and later to summarise the views of experts for the benefit of the general public. We take this opportunity to extend to Dr. Hora our sincerest thanks for his valuable co-operation.
