

Plaice Fishery of the North Sea

THE fourth of a valuable series of post-War reports on the plaice stocks of the North Sea has recently been published by the Ministry of Agriculture and Fisheries.* The first (published in 1923) dealt with the effect of the partial closure to fishing due to hostilities—so far as it could be ascertained by two years of intensive work. It was found that the stock as a whole consisted of much larger fish than in pre-War years. This condition lasted but a short time after normal fishing activities were again resumed, and a second report, dealing with the investigations in the period 1921–23, recorded a marked falling off in abundance and size, though the fish had not by that time reached so small an average size as in pre-War days. Further work carried out in 1924 and 1925 formed the substance of a third report in which it was stated that the effects of the War were still being felt but that other important changes were also taking place. The information acquired was insufficient, however, for the purpose of separating the effect of natural fluctuations in the stocks from the effect of fishing. From 1926 onwards, therefore, the work carried out by the Ministry was increased in scope and magnitude with special reference to the solution of this problem.

The present report deals in a very comprehensive manner with the statistical and ichthyometrical data gleaned during the period 1926–30, and these are also compared and contrasted with those of the earlier years.

Considered as a whole, this report shows that the total quantity of plaice landed by British vessels has been declining slowly during the last five years.¹ Not only is this the case, but also the investigations dealing with market categories clearly indicate that 'smalls'—which normally account for about seventy per cent of the total landings and may consist of fair-sized fish—have also been steadily deteriorating in average size and now consist of really small fish of low economic value. While this falling off in size may not be unconnected with natural fluctuations, the combined results point to the conclusion that it must be attributed to ever-increasing intensity of fishing.

While the British fishery has decreased, however, the total landings of plaice from the North Sea by all countries has grown very much larger in the five years under consideration, the greater portion

* Ministry of Agriculture and Fisheries. Fishery Investigations, Series 2, Vol. 12, No. 5, 1932. "Report on the English Plaice Investigations during the Years 1926 to 1930." By D. E. Thursby-Pelham. Pp. 149. (London: H.M. Stationery Office, 1932.) 6s. 6d. net.

of this increase being credited to Denmark, with Holland and Germany sharing in it to a small extent. This change in the fish stocks is reflected in the constitution of the fishery. Whereas formerly the steam trawlers of Great Britain, Holland and Germany were the principal vessels engaged in catching plaice, their importance is now declining and their place taken to a considerable extent by Danish motor craft using seine nets and by German and Dutch coastal vessels.

The decline of steam trawling and the rise of the Danish seining industry is considered to be probably beneficial for the plaice stocks. In Denmark the demand is for living plaice. In consequence, a high size limit is imposed upon fish landed and, in consequence, undersized fish are spared for future capture. English and Dutch trawlers, on the other hand, destroy nearly all the undersized plaice they catch. In both England and Holland, too, a considerable industry is said to exist in supplying small fish to fish meal and fertiliser factories, whereby a very large number of plaice too small for human consumption are sacrificed. That the size of the plaice landed in all countries is decidedly small and tends to grow smaller, and that this is prejudicial to the interests of the fishing industry, is the main conclusion reached. The consumer also is shown to suffer, for experiments have been made which demonstrate conclusively that there is considerably 'less to eat' proportionately with decrease in the size of the fish.

The report under review is a notable contribution to the study of the plaice stocks in the North Sea, but the problems with which it deals cannot be said yet to be finally settled, and differences of opinion concerning them still remain. Dr. Buckman, of the State Biological Institute, Heligoland, is firmly of the opinion that the plaice stocks of the North Sea are being much more rationally fished to-day than they have ever been before, and holds tenaciously to the view that the present intensity of fishing has not, as yet, resulted in any serious general depletion of the plaice stocks as a whole. Other Continental workers are also inclined to this belief. Great as has been the work accomplished, therefore, there remains still much to do. We look forward with interest to the appearance of reports recording still further progress towards supplying answers to some of the many questions which remain as yet unanswered.

¹ *Bulletin Statistique des Pêches Maritimes*, vol. 20.

Forestry in New Zealand

AS appears to be inevitable in times of economic stress, reductions were made in the research staff of the New Zealand State Forest Service as in other directions, and the Forest Biological Research Station at Nelson, New Zealand, was closed soon after its official opening. It is pleasing, however, to be able to read as reported in the annual report of the New Zealand State Forest Service for the year ending March 31, 1932 (W. A. G. Skinner, Govt. Printer, Wellington), that research work was continued on a restricted basis.

The total area of new plantations under the

afforestation campaign exceeded 40,000 acres, the total area of State plantations being now approximately 348,000 acres, in addition to which there is a very large area of commercially-formed plantations in New Zealand. The milling industry naturally suffered from the depression and the volume cut was not more than half that exploited two years previously. The most interesting and important event in the local market was the increased domestic demand for exotic locally grown timber for use in the various box-making factories. With the large and increasing area now under exotic coniferous

plantations in New Zealand, it is scarcely surprising that the important question of disposing of the thinnings which it would be necessary to make in them has been receiving the most serious attention; and investigations have been carried out by utilisation research officers.

Apparently it is now hoped that the manufacture of the thinnings into boxes and crates will prove a promising industry. In this connexion, it is pointed out that whereas during the past year saw-mills operating in native bush were, on the average, cutting only up to 40 per cent of their normal output, mills working in exotic plantations were reported to be cutting beyond 60 per cent of their normal capacity. The saw-milling industry is also recognising the value of dry kilns, two new units being established during the year, one for drying box timber, whilst another for the same purpose was under construction. Timber trade-extension efforts, inaugurated during the year for Southland silver-beech (*Nothofagus Menziesii*), were so satisfactory that it was decided to send representatives to Great Britain to continue negotiations. Both in Australia and Great Britain this timber has been shown as promising for rifle-stocks.

It was estimated that the area planted in trees by private companies approached 250,000 acres, an increase for the year of 50,000 acres, whilst local bodies planted 6,500 acres, making the total under corporate control of approximately 27,500 acres. Thus the total area of commercial tree-plantations other than those established by the State Forest Service (which amount to 348,000 acres) is in the vicinity of 277,500 acres.

The area planted by the State fell off during the year, and says the report, "will probably decline still further for some years to come in accordance with Government policy to taper off the afforestation operations of the State". In view of the great commercial activity in this direction, the decision of the Government must be regarded as the correct one; since the policy of a Government should ever be avoidance of direct competition with commercial projects.

The first laboratory study undertaken by the Forest Service—an investigation into the fundamental physical and chemical properties of the indigenous timbers—has been completed after ten years' work. The results will be published shortly, and structural grades, together with working-stresses, developed for the principal species.

The most significant information in the report under review is to be found in the remarks on the exotic plantations. New Zealand has now 625,500 acres of these and the area increases yearly. It is difficult to estimate the important influence these will exert on the commercial development of the country in the future. Already they are being used extensively in the box-making industry for the export of New Zealand produce; "during the year over a million apple-cases were manufactured from insignis pine (*Pinus radiata*), several hundred thousand fruit-boxes for the Pacific Islands fruit trade, over one hundred thousand benzine-cases, and several hundred thousand cheese-crates, besides numerous other containers".

There is much in this annual report which merits study by officers in other parts of the Empire. The research work and experience gained in the utilisation of the thinnings from the exotic coniferous areas should prove invaluable to other growers of this type of plantation.

University and Educational Intelligence

CAMBRIDGE.—R. C. Evans, of Clare College, has been appointed University demonstrator in the Department of Mineralogy and Petrology.

Frank Smart prizes have been awarded to M. Ingram, Queens' College (botany) and G. C. Varley, Sidney Sussex College (zoology and comparative anatomy).

W. S. Bristowe, Gonville and Caius College, has been approved for the degree of Sc.D.

EDINBURGH.—Dr. D. O. Morgan, senior research assistant at the Institute of Agricultural Parasitology, St. Albans, has been appointed lecturer in helminthology in the University and in the Royal (Dick) Veterinary College.

WALES.—Dr. Ralph M. F. Picken, medical officer of health of the City of Cardiff, has been appointed Mansel Talbot professor of preventive medicine in the Welsh National School of Medicine, Cardiff, in succession to Prof. E. L. Collis, who is retiring. Dr. R. St. A. Heathcote has been appointed to the independent lectureship in materia medica and pharmacology.

Dr. John Robinson Airey, principal of the City of Leeds Training College since 1918, is retiring at the end of the present session. A well-known mathematician, Dr. Airey has, since 1912, been a member of the Committee on Calculation of Mathematical Tables, and was secretary to this Committee from 1918 until 1930. Dr. Airey's work was of prime importance in the development of aircraft during the War when his services were available at Farnborough. At present he is engaged on calculations for the British Association Committee on the Constitution of the Stars. Dr. Airey will be succeeded at the City of Leeds Training College by Prof. R. W. Rich, professor of education at University College, Hull, for the last three years.

TECHNICAL education in England and continental Europe was discussed on May 10 at a meeting of the Royal Society of Arts. Lord Eustace Percy was in the chair. The proceedings, reported in the Society's *Journal* of May 26, began with a paper by Mr. A. Abbott, formerly chief inspector, Technological Branch of the Board of Education, whose official report on his visits to France, Belgium, Czechoslovakia and Holland was recently noticed in these columns (*NATURE*, Dec. 24, 1932). Among other opinions to which his special qualifications lend exceptional weight are the following: the training in manual skill given in senior elementary schools has been of substantial value to British craftsmanship and should be increased in volume and enlarged so as to include a far wider range of materials and operations; we should continue to look to our schools of general education rather than to trade schools, as on the Continent, for the great bulk of our supply of skilled workmen; as regards the higher staff of industry, we should arrange for the release of young men during working hours for attendance at technical schools instead of relying on evening study; the leaders of industry, both employers and employed, should overhaul antiquated recruitment policies and readjust them to modern conditions, which have been transformed in the last thirty years by the wide extension of