

sorting-out tests can be made with the grating spectrometer and with the quartz spectrograph, whilst the projection comparator is a valuable aid, in engineering, for the ready optical gauging of interchangeable parts, such as screw-threads.

An important development, too, is the use of radiography in the examination of metals; but this need not be dealt with here, as it was referred to in an article on "Industrial and Medical Radiology" in NATURE of February 26.

### The British Sea Fisheries.<sup>1</sup>

THE latest book on the sea fisheries comes most opportunely at a time when everyone interested in these matters is looking for a policy. For the last two years a multitude of committees and conferences have been considering a situation

of fish might be utilised, cost of new construction, labour troubles, etc.—these are the matters that immediately and personally concern those engaged in the industry. The conditions are very different from those that obtained half a dozen years ago.



The herring fleet in Fraserburgh Harbour. From "The Sea Fisheries."

that has become acute as the result of war conditions, but which was rapidly developing even in 1913. There was then a great recrudescence of interest in the longshore and inshore fishermen; there were the perennial questions of the impoverishment of the fishing-grounds and of how this might be averted; and there were indications, even then, of troublesome problems relating to the distribution and marketing of the fish caught.

There is no doubt at all that it is these latter difficulties that have been accentuated by the circumstances of the last two years. Such things as landing facilities, railroad and motor transport, market accommodation, cold storage and curing in order that gluts

Then there was practically no control; but one Government Department now has to do with railway facilities; another fixes wholesale and retail prices; while others again have to do with regulations of many kinds. The result is, for the present at all events, a confusion which is apparent to almost everyone.

Under our economic conditions the profit-factor in industry is still the dominant one. The bulk of the fish landed are caught in order that they may be sold so as to yield a "return" on the capital invested; otherwise no fish would be landed except the small fraction taken by individually owned boats and longshoremen who work for a living and sell their fish for whatever it will bring. How is the deep-sea fishing industry to be carried on so as to yield a sufficient profit?

<sup>1</sup> "The Sea Fisheries." By Dr. J. T. Jenkins. Pp. xxxi+299. (London: Constable and Co., Ltd., 1920.) Price 24s. net.

Long ago we should have left *that* question to the trade itself, but it is now clear that a policy of *laissez-faire* is no longer possible. The people must have food. The State has already taken partial control, and the logical development of such conditions seems to be the public organisation of the means of distribution and, if so, the control of profits as well as of prices.

Dr. Jenkins does not deal with these latter-day economic questions. The conditions are transient, and it is quite impossible for any man to get trustworthy information tending to elucidate them. Probably no administrator or office is big enough to deal adequately with the difficulties of the moment, and the situation must be left to resolve itself in the near future. On the other hand, it would be hopeless to attempt to study it without reference to the other fundamental questions which we have indicated. Is there really an impoverishment of the fishing-grounds, and, if so, what restrictions are necessary that this may be avoided? Regulation being necessary, what is the best form of administration? What is industrial efficiency as applied to the fisheries? Judged by the ratio of fish caught to the man-power employed, the inshore and long-shore fishermen are inefficient, and their methods wasteful. But, that being so, is it in the national interest that a prolific, hardy, and versatile stock should be allowed to decline? What, above all, are the nature and value of the information which we use in order to decide upon these matters?

Even in present circumstances, then, there are fundamental problems that must be considered before we tackle those of the moment, and it is these with which the author deals. He gives a summary of the methods of sea-fishing employed in Great Britain, and an historical sketch of the development of the trawl- and herring-fisheries. This is based on prolonged literary research and is very well done. There are a summary of the legislation applicable to the industry, a short account of the British and foreign administrations, and a *résumé* of the chief results of the fishery commissions of the strictly modern period. A well-selected bibliography should enable the reader to follow the various discussions in greater detail than that which falls within the scope of the book. It is very proper that considerable weight should be given to the scientific side of the subject, and in his introduction the author deals most conveniently with the situation of the industry at the close of the war period, especially with regard to the reconstruction of the national administrations and the development of an adequate machinery for scientific and economic investigation. Altogether, the work is one that must be considered quite essential to anyone who seeks to discover, beneath the confusion of the moment, the natural conditions upon which the continued development of the national sea fisheries, as a whole, must necessarily depend.

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### Notes.

THE annual meeting of the British Science Guild will be held at the Goldsmiths' Hall on Tuesday, June 8, at 3 p.m. Lord Sydenham, president of the Guild, will deliver an address on "Science and the Nation," and the president-elect, Lord Montagu of Beaulieu, will speak on "Some National Aspects of Transport." The adoption of the report on the Guild's work since the last annual meeting will be moved by Lord Bledisloe, and seconded by Sir Gilbert Parker. The Guild is extending its activities in several directions, and all who believe in the application of scientific knowledge and method to national affairs of every kind should give it support. Tickets of admission to the annual meeting may be obtained upon application to the Secretary, British Science Guild, 6 John Street, Adelphi, London, W.C.2.

At the Imperial Entomological Conference to be held in London on June 1-11, the subjects to be discussed, although mainly relating to agriculture, are not the less on that account of great general interest, and ought to make a wide appeal. Mr. H. A. Ballou, just returned from an investigation of them in Egypt, will read a paper on "Cotton Pests," a subject which he has long studied in other parts of the Empire. Dr. R. S. MacDougall will read one on "Insects in Relation to Afforestation," which is a subject greatly needing attention in our own country at the present day. There will also be read important papers on the special insect pests of tea and other crops, as well as on the local insect pests of various places within the Empire; and amongst other subjects for discussion "The Education of Economic Entomologists" should prove attractive, the more so as Profs. Maxwell Lefroy and Sydney J. Hickson have promised to give their views upon it. The meetings are all to be held at the rooms of the Linnean Society, Burlington House, and visits have been arranged to Oxford, Cambridge, and the Rothamsted Experimental Station, Harpenden. "The Work and Finances of the Imperial Bureau of Entomology" will be considered at the business meeting on the first day, when, doubtless, there will be nothing but greatly deserved praise for the work, and very serious consideration in regard to the finances. It is to be hoped that as an outcome the Bureau will be enabled to carry on, unhampered and unimpaired, the extremely valuable work it has done during the seven years of its existence.

A PAN-PACIFIC Scientific Congress has been organised to meet at Honolulu on August 2-20. The programme of the congress is directed by the Committee on Pacific Exploration of the U.S. National Research Council, and the chairman is Mr. Herbert E. Gregory, director of the Bishop Museum at Honolulu. The papers to be read will deal with the present status of knowledge of anthropology, biology, geology, geography, and related sciences so far as they refer to the Pacific Ocean, and will place emphasis on the research work which it is desirable to inaugurate. The significance and bearing of the research work on other fields of study will be dealt with in considerable detail. It is suggested that in the working out of