

stituent. In order to explain the production of both kinds of rays, the authors suggest that the series may branch at uranium-X into UrX_2 and Act, with the discharge of β rays, and that in one series so produced the β -ray change is followed by the α -ray change, and in the second the reverse takes place. In a second paper they confirm the discovery of UrX_2 by Fajans and Cobring, and describe a simple method for its preparation, which consists in filtering the UrX_1 solution through a layer of moist tantalic acid. The latter retains the UrX_2 , whilst the UrX_1 remains in solution with the thorium. This process is based upon the relations of UrX_1 and UrX_2 in the periodic table.

J. B. C.

THE REORGANISATION OF THE FISHERY AUTHORITIES.¹

THIS report presents the results of the latest of a long series of inquiries into the productivity and administration of the British Sea Fisheries. In many ways it is the most important document of its kind presented to Parliament during the last twenty years. Former fishery inquiries usually considered the fishing industry as it is carried on on the high seas, and international questions so greatly complicated any possible action, both with regard to scientific investigation and administration, that might have been taken that little in the way of legislation resulted from them. The Committee now reporting was appointed little more than a year ago; it has considered domestic, rather than international fishery matters; and there is every indication that its utterance represents an official desire for legislative action. Altogether the recommendations are of greater significance than those of any Committee or Commission since 1885.

These recommendations are almost revolutionary. They presuppose a coordinated and reasoned scheme of scientific investigation of the fisheries of the three kingdoms, and at the same time they urge the establishment, in England, of a public Department possessing the status, *personnel*, and equipment now enjoyed by the fishery authorities of Scotland and Ireland. In these countries there are strong central fishery departments regulating and investigating the national industries with the assistance of money directly voted by Imperial Parliament. The English Department possesses no power actually to regulate the fisheries, and until a few years ago it carried out no scientific investigation. Regulation was entrusted, in 1888, to local committees created on the initiative of county and borough councils, and deriving their revenue from local rates levied on the maritime counties. Eleven of these local committees exist at the present time, but, with the exception of the Lancashire body, they have done little to regulate methods of sea-fishing, and nothing at all to investigate and develop the industry. Only by the cordial cooperation of the wealthy inland boroughs, and by amalgamation with neighbouring counties has Lancashire been enabled successfully to regulate

and investigate its local fisheries, and even there scientific work has been carried on precariously and with little promise of continuity. Two lines of advance were suggested to the departmental committee, first, the amalgamation of the local authorities on the south-west, south, and east coasts into two or more bodies similar to the Lancashire committee, and secondly the abolition of the local committees and the transfer of their powers of regulation to the Fisheries Branch of the Board of Agriculture and Fisheries.

The latter course is that recommended. The local bodies are to continue to exist as small advisory councils deprived of the power of rating, or of appointing officers. Their staffs are to be transferred to the Board, along with the power of initiating and enforcing restrictions and prohibitions of methods of fishing. Local resident inspectors will be appointed to supervise the work of regulation, and to place the fishermen in touch with the local advisory committees on one hand, and the Board on the other. To all these functions will be added that of the organisation and development of inshore fishing. How this work of development will be carried out is only vaguely suggested in the report, but in the first place a Fisheries Organisation Society, on the lines of the Agricultural Organisation Society, will be founded, and will be financed by public funds. This body will promote the idea of cooperation among fishermen, will assist them in marketing their produce, in securing better means of transport, and in obtaining credit for the provision of boats, motors, and other gear. Its work will be largely propagandist at first. The Central Department itself will undertake the task of improving or constructing fishery harbours and piers, and better channels and breakwaters; of organising the shell-fisheries by means of regulating and several orders, and the provision of plant whereby such molluscs as mussels and cockles can be freed from dangerous pollution; of intervening where the rights of fishermen are threatened; and of the dissemination of intelligence of value in the disposal of the produce of the fisheries.

Scientific investigation will be maintained and amplified where it exists and instituted on those parts of the coasts where it is not yet carried out. This will be controlled and coordinated by the Board, and it is now generally known that a scheme for the adequate investigation of the fisheries of all three countries has been prepared, and only awaits sanction and the provision of very large initial and annual grants of money by the Development Commissioners before it is put in operation. That the importance of research and statistical investigation has been recognised by the Committee is apparent, but that it is all-important *before* beginning the task of repealing and simplifying regulations, or of the further development of the shell-fisheries, or the working-out of an exhaustive system of obtaining fishery statistics, has not been clearly apprehended, we think. Yet experience of the huge mass of futile restrictive legislation built up in the past should have taught them to be

¹ Report of the Departmental Committee on Inshore Fisheries. Vols. i. and ii., Report, Appendices, and Minutes of Evidence. [Cd. 7373 and 7374.] (1914.)

averse to making further radical change, or constructive legislation, before attaining much more knowledge of the natural history of the marine economic animals than we yet possess.

The weakest part of the Report is that dealing with the better education of the fishermen. It does not appear to us that the Committee has received sufficient evidence on this question, or that it made itself acquainted with the educational machinery already in existence, or even that it properly considered the admirable memorandum on this subject by the Board of Education, which is printed in the report. The Committee distinguishes between the instruction that is necessary for the inshore, and that which is necessary for the deep-sea fishermen, a distinction which it will be impossible to maintain in practice, since one class is continually being recruited from the other. The deep-sea man urgently requires instruction in working methods of navigation—much more instruction than is at present recognised except by the Board of Trade, which tends continually to raise the standard of its Fishery Examinations. The inshore man requires a knowledge of his technique, net-making, fish-curing, and the management of small boats at sea, for instance, and how this is to be acquired except by actually practising it under the instruction of older men we do not know. Both kinds of men require above all a much sounder elementary education than they at present possess—without this the further instruction will surely fail in its object. The Committee recommends supplementary courses in the elements of navigation, the natural history of the sea (without biology!), practical ropework, sail-mending, signalling, carpentry and metalwork, all for boys attending sea-board primary schools. It recommends evening continuation school courses in the same subjects, but with the addition of fish-curing for girls, and motor-mechanics for boys, these without restriction of age. It recommends occasional lectures in fishing centres in order that a knowledge of the natural history of fishes might be imparted, that the necessity for restrictions on methods of fishing might be explained, and that the resentment of fishermen to these restrictions on their operations might be obviated.

It is difficult, and there is no space at our disposal, to consider these recommendations seriously. They do not matter since the whole organisation of the elementary and technical education of fishermen, inshore and offshore, is at present being actively developed by the Board of Education and by the local authorities, and will work itself out in a satisfactory manner all the sooner under the stimulus of a reorganisation of the fishery authorities.

Apart from these defects (due obviously to the desire of the Committee to report without delay, and to the fact that its primary concern was with industrial development) the report is a statesman-like piece of work. We cannot help feeling that now or never is the time for the reorganisation of the fishery authorities on one or other of the

alternative lines suggested in the evidence, and for the strengthening and adequate equipment of the Central Department. It is also sincerely to be hoped that investigation in the widest sense, scientific and statistical and industrial, will at all steps accompany this reorganisation in order that the failures of past fishery legislation may be avoided.

J. J.

AUSTRALIAN MEETING OF THE BRITISH ASSOCIATION.

AS August draws nearer the organisation of the first Australian meeting of the British Association is gradually approaching completion. The overseas party will number, roughly, 350, and will for the most part leave England at the end of June or the beginning of July. The Blue Funnel liner *Ascanius* is to convey a considerable proportion of the advance party for Western Australia, while the main body of the visitors will leave later in the Aberdeen liner *Euripides* (on her maiden voyage), and the Orient mailboat *Orvioto*. The latter will take on board at Fremantle the advance party, and will arrive at Adelaide on the same day as the *Euripides*, viz., August 8. Other lines and other routes will bring small detachments of members.

A special arrangement has been completed with the Customs Department in Australia for the speedy handling of luggage at ports of entry. Clearance will be effected very rapidly of all baggage certified to contain only personal effects. Members bringing with them anything subject to taxation will be required to make the usual statements and payments.

The matter of overland conveyance in Australia of the overseas party is one of not inconsiderable difficulty. To the lively satisfaction of the Federal Council and the various committees controlling arrangements, it was decided at a conference of the Premiers of the different States, held at the beginning of April, that the hospitality of the several State railways should be offered to all visiting members without distinction. The desire is very strong in Australia that there shall be the least possible amount of distinction made between the various members of the visiting party. Where differential treatment does come in, it is simply because the numbers in the party put equal treatment beyond the ability, though not the wishes, of Australia.

The Federal Handbook, a volume of 600 pages, is now published and about to be distributed to the visiting party by the High Commissioner for the Commonwealth prior to the party's departure. The book is the work of leading authorities of the country, and neither trouble nor money has been spared to make it worthy of the occasion of its issue. It is the intention of the Commonwealth Government to present a copy not only to each visiting member of the Association, but also to each member of its General Committee.

State handbooks, supplementary to the larger and more general work, are practically all com-