

energy expended in their capture, not because any noteworthy change has occurred in their numbers.

To sum up the international work, then, it would seem that considerable waste of energy and funds is caused by the re-publication of papers, and by the manner in which several of these overlap. Moreover, it is beyond the scope of science to enter into a disquisition on the fluctuations of the market-price of fishes. It is also noteworthy to find that, after seven years' work, the council now see the magnitude of their task and the absence of finality in their labours. There is no sign of "impoverishment"; on the contrary, their cautious words lean to the opposite view. The committee recommend continuation of their labours, basing this on the fact that various nations share in the North Sea fishing, and that no action could be taken without the consent of the other countries; but as to any important result to be gained by the fisheries there is silence, for it cannot be supposed that hydrography, the collection of fish-food and bottom deposits, can do duty any longer as necessary measures for the welfare of the North Sea fisheries.

W. C. M.

THE ASSOCIATION OF TEACHERS IN TECHNICAL INSTITUTIONS.

AT the fifth annual meeting of the Association of Teachers in Technical Institutions, held on Saturday, November 6, Mr. J. Wilson, of the Battersea Polytechnic, president of the association, in moving the adoption of the annual report, reviewed the year's work. In the course of it he laid special stress upon the very important step taken by the association, at its conference at Liverpool, in putting forward a definite series of resolutions relating to educational reforms which appear to them as teachers to be essential to the continued progress of technical education. In these resolutions the association expresses its opinion that it is necessary to raise the school-leaving age to fifteen years; it asks that special attention be given to the teaching, in primary schools, of elementary science, practical arithmetic, and manual training; it calls for complete coordination of the work of the evening continuation schools with that of the evening technical schools; it asks for the provision of technical-secondary schools, including trade schools, with a generous system of scholarships, including allowance for maintenance; and, finally, it endorses the recommendations of the Minority Report of the Poor Law Commissioners respecting compulsory attendance of boys for technical instruction for not less than thirty hours per week. Thus a very definite policy in some important educational problems affecting technical education has been taken up by this association.

Another important, and in this case non-controversial, action is now being broached by this body of teachers. It suggests the desirability of holding a series of "round table" conferences between accredited representatives of primary, secondary, and technical teachers, with the object of discussing the possibility of reforms in the curricula and methods of work in the schools, from the point of view of the needs of the pupils who at a later stage pass on to the technical schools. Most urgent is the necessity for such conferences in the case of the primary and technical teachers, in order that they may arrive at a mutual understanding of the needs of the pupils and the possibility of meeting them, because in the majority of cases where pupils receive any formal teaching after the primary-school work, it is to the technical teachers that they come for it. Such conferences abound with immense possibilities for the benefit of education in all its phases. Broader and more complete knowledge of each other's branch of work and its needs and possibilities must necessarily result, and as a consequence many apparent difficulties in the way of making the educational work in the two or three types of school truly continuous, without unnecessary overlapping, will be removed. The better knowledge of each other's work will remove some prejudices and bring about the necessary unanimity of action in those matters which affect the teachers individually and as a class, such as conditions of service, security of tenure, and superannuation for all classes of teachers; these views being held by the association, it is all but unnecessary to

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point out to any other class of teachers, who have the duty, responsibility, and honour of teaching the pupils in their earlier years, that criticisms made by this association on the preparation of those pupils for later technical studies is not directed at the teachers, but at the systems imposed upon them, in which ideas, good in themselves, are allowed such sway as to mask the greater essentials of elementary-school work.

In 1888 Parliament passed a Technical Education Act, and for the past twenty-one years progress has been vigorous and rapid. Nevertheless, technical education has touched only a very small fraction of the enormous mass of material represented by the workers of all grades in the industries of the country. We can only regard it as having entered upon its duties, and must look forward to dealing with much larger numbers of students and to a greater range of work. There are two chief factors which may assist in bringing in much larger numbers of the young workers. The first of these is the increasing interest and help of the employers. Efforts in this field have so far produced but scanty results, and the association as a body is not very hopeful of this field. The second factor, to which the association looks with greater hope, is some form of organised effort by the State to achieve the following ends:—

- (a) Elementary education to be made more real and practical; less "bookish," without diminishing its cultural value.
- (b) The establishment of some system of compulsory attendance for continued education for all between the ages of fourteen and seventeen years.
- (c) The linking together of the three main grades of educational effort.

(d) The complete coordination of the work of the evening continuation schools with that of the evening technical schools.

It is agreed by many observers, within and without our technical institutions, that technical education is rapidly approaching a crisis in so far as its higher work is concerned in the London polytechnics. The special feature of the moment is the relation of technical institutions to the university colleges. The association holds the opinion that there is room and to spare for the activities of both in those phases of their work which are common, and fully recognises that each has its own special function. It claims that the opportunity for complete study should be within the reach of every capable student, and that, too, in a sympathetic atmosphere. There is visible at the present time, both in London and the provinces, a tendency, under the guise of coordination, to curtail this higher work in both science and technology in these technical institutions, and thus to reduce seriously the students' opportunity. This tendency, if carried into effect, would be disastrous, under present social conditions, to the highest interests of national education, especially as regards the evening students.

H. ADE CLARK.

AN ORNITHOLOGIST IN QUEENSLAND.

IN June last the editors of the *Emu* issued a special number (vol. viii., part v.) containing a very interesting account, by Mr. S. W. Jackson, of a trip to northern Queensland in search of the nest and eggs of the tooth-billed bower-bird (*Scenopaestes dentirostris*). The expedition was undertaken on behalf of Mr. H. L. White, and appears, in spite of many difficulties, to have been eminently successful in the attainment of its object. The exploration of the tropical forests of Australia is by no means devoid of danger. Mr. Jackson himself was laid up for a week with "Johnstone River fever," which he regards as the almost inevitable price of his wanderings in the moist, fever-stricken scrubs, and one of his natives was killed by the falling branch of a tree, while the "scrub-itch mites" appear to constitute a plague of no mean order. It was a long time before he succeeded in obtaining the nests and eggs of the tooth-bill, though the playing-grounds were met with in great abundance.

A detailed, though unfortunately somewhat disconnected, account is given of the habits of these truly remarkable birds. They were first observed shortly before the commencement of the breeding season, each one occupying his

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