According to a narrative published in the January number of *British Birds*, Miss Haviland found the species comparatively abundant in the Golchica district, and procured several skins, as well as a clutch of eggs and a couple of young birds. The last are very similar to young dunlin, but even when a few days old may be distinguished by the shape of the beak. As soon as hatched they leave the dry upland slopes for the sphagnum-bogs that occupy the hollows in the tundra.

R. L.

CLAY AND POTTERY INDUSTRIES.[1]

IN an interesting and valuable introduction, Mr. Graham Balfour, who has been for so many years closely associated with educational work in North Staffordshire, says:—"This volume of collected papers is the first fruits of the Stoke-on-Trent Pottery School, and will in due course . . . be followed by many successors of equal size and value."

The publication of this record of work done by the students and members of the staff coincides with the opening of the New Central Schools of Science and Technology at Stoke-on-Trent, which contain finely equipped chemical, physical, and pottery laboratories and class rooms, and in which the old pottery school finds at last a suitable home.

The school has been conducted by Dr. Mellor for some ten years under conditions which would certainly have damped the ardour of any ordinary man, but this record of work accomplished during these years by Dr. Mellor and his students is a striking testimony to the enthusiasm and ability with which the work has been carried on. It is no longer necessary or desirable that an English pottery student should go to Charlottenburg for his training as a ceramic chemist, for here at hand he has a splendidly equipped school, which has already built up a tradition for research work of the highest importance. The subjects dealt with cover a very large field, but nearly all are of direct practical value to the potter.

Paper xxix. on studies on cylinder grinding is a most excellent contribution, and is a typical example of the thoroughness with which the subjects are treated in their theoretical and practical aspects.

Paper xxiv., on the absorption and dissolution of gases by silicates, by Mr. Bernard Moore and Dr. Mellor, is an extremely interesting and important paper of direct practical value, and the publication of this and other similar work has already beneficially affected pottery practice in this country.

The papers on the nomenclature of silicates and on the chemical constitution of the kaolinite molecule are in another category, but although they are not of direct practical application, they are of great interest to the ceramic chemist, and they show that the outlook of the school is comprehensive and that the work done has an importance beyond the confines of the pottery industry.

The illustrations and descriptions of apparatus—much of which is here described for the first time—are excellent, and it need scarcely be said that Dr. Mellor has used his mathematical ingenuity to advantage in working out and in explaining the problems dealt with. The references to original papers and other published work of German, French, American, and English chemists is a very useful feature of the book.

The papers are naturally of very different values, and their publication in one volume produces a rather uneven "Mosaic" effect, but the impression one gathers from a perusal of the book is the wide scope and thoroughness of the work and its practical value. It is a unique publication in this country as a record of work done by so small a school and in so modest a way.

JOSEPH BURTON.

[1] "Clay and Pottery Industries." Being vol. i. of the Collected Papers from the County Pottery Laboratory, Staffordshire. By several Authors. Edited by Dr. J. W. Mellor. Pp. xvii+411. (London: C. Griffin and Co., Ltd., 1914.) Price 15s. net.

THE IRISH TECHNICAL INSTRUCTION ASSOCIATION.

THE proceedings of the Annual Congress of the above Association, held at Killarney in May last, are of more than usual interest. The operations of the association cover virtually the whole of Ireland, and the congress just held is the thirteenth since the Act of 1902. Without any question these congresses have contributed largely to the development of scientific and technical instruction in Ireland, and incidentally to a keener interest in a more efficient elementary and intermediate education.

The subjects dealt with have been concerned mainly with industrial progress and with the conditions and problems which await investigation and solution in order to ensure a stable advance in the agricultural, industrial, and commercial well-being of the nation.

In this endeavour there is the closest co-operation on the part of the Government and other official authorities with the education committees of the various areas, and four of the papers of high importance, dealing with the "Problem of Small Industries," "The Technical Training of Skilled and Unskilled Workers in France and Germany," "An Industrial Survey of Ireland," and "Technical Instruction for Small Holders," were read by officials of the Department of Agriculture and Technical Instruction, and Mr. T. P. Gill, the secretary of the Department, gave an inspiriting review of the progress of technical instruction in Ireland since its initiation in 1902.

The position and future of the Irish woollen trade was the subject of a highly interesting paper by Mr. J. F. Crowley, of Siemens Bros., Ltd., with the object of showing that the industry, now somewhat languishing, is peculiarly suited to the genius, temperament, and circumstances of the Irish people, and that, given the organisation, both industrial and commercial, due technical training and capital, there is no reason why the industry should not take a high place amongst the productive enterprises of Ireland. It is essential to its success that there should be, amongst other measures, a central woollen textile school established in the south of Ireland for the efficient training of the various grades of persons engaged in the industry.

The paper by Mr. Macartney-Filgate, well illustrated by maps, diagrams, and lantern slides, setting forth the varied industries and natural resources of Ireland and suggesting lines and methods of scientific development, was of much interest. Whilst the available coal supply is limited, there is water power available, easy of transformation into electrical energy, to the extent of 1¾ million horse power, together with an almost unlimited supply of peat fuel, and examples were given showing how this and the former source of power had been successfully utilised on a large scale, and only needed capital and enterprise still further to develop it. The extraction of oil from shale on a considerable scale has also been successfully begun, rendering it possible to utilise the internal combustion engine for the service of the small manufacturer. Much valuable information was given by Mr. L. J. Humphreys on the efficiency of co-operative effort in his paper on "Technical Instruction for Small